ForeScout CounterACT

Evaluator Guide

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1. Highlights

ForeScout CounterACT is an *automated security control platform* that delivers real-time visibility and control of all devices on the network.

With ForeScout CounterACT, you get:

- Network Access Control
- Mobile Security
- Endpoint Compliance
- Threat Prevention

Recently ranked by Forrester Research as the industry's top performer in both strength of current product offering and strategy, CounterACT is easy to deploy and manage because it requires no agents, no hardware upgrades or reconfigurations. Everything is in one appliance.

Frequent Use-Cases for ForeScout CounterACT

- *Visibility.* You can only secure the things you know about. ForeScout CounterACT gives you real-time visibility into everything on your network—all devices, all operating systems, all users, all applications. Watch the video.
- *Guest networking.* ForeScout CounterACT for Network Access Control lets guests and contractors use their personal computers on the customer's network without compromising the network security. This provides both security and productivity benefits. CounterACT includes an automated guest registration process and can limit the guests access to just the Internet or to specific network resources. Watch the video.
- *Mobile Security.* IT managers are worried about iPhones, iPads, Android and other mobile devices that can connect to the network. ForeScout CounterACT for Mobile Security provides real-time visibility and control over smartphones, tablets and other mobile devices. This lets enterprises leverage the productivity benefits associated with modern handheld devices while protecting the network from the dangers of such devices. Watch the video.
- *Endpoint Compliance.* ForeScout CounterACT for Endpoint Compliance finds and fixes security gaps, such as endpoint security agents that are not installed or working properly, out-of-date antivirus, etc. Because ForeScout CounterACT is agentless, it works with all type of endpoints–managed and unmanaged, known and unknown, physical and virtual. Watch the video.
- *Threat Prevention.* ForeScout's patented ActiveResponse™ technology is included in every product that we sell. ActiveResponse blocks both known and unknown attacks with 100% accuracy. This unique technology does not require signature updates or other forms of maintenance, so it requires zero maintenance. ActiveResponse provided zero-day protection against Conficker, Zeus and Stuxnet. Learn more about ActiveResponse here.

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The Challenge: Empowering Greater Accessibility while Maintaining Security

ForeScout CounterACT is a hot product because IT managers are now dealing with two big security challenges:

1. A huge influx of consumer devices (iPhones, iPads, Androids, etc.) onto enterprise networks.
2. Rapid adoption of virtualization, both in the datacenter and on the desktop. In both cases, ForeScout CounterACT allows organizations to benefit from these transformative technologies without compromising security.

ForeScout's Differentiation

Unlike other policy enforcement precuts, ForeScout CounterACT is easy and fast to deploy.

- One box, one day to install. Everything is contained in a single appliance. CounterACT is available in both physical appliance and virtual appliance formats.
- ForeScout works with existing infrastructure. All your existing switches, routers, firewalls, endpoints, patch management systems, antivirus systems, directories, etc. Previous network access control products required installation of 802.1x agents on endpoint systems and replacement or reconfiguraiton of network switches to support 802.1x.
- Agentless. ForeScout CounterACT does not require pre-existing knowledge of network devices or installation of any agent software on the endpoint devices. This allows CounterACT to be effective against all types of endpoints—managed and unmanaged, known and unknown, authorized and rogue.
- Non-disruptive. Unlike first generation NAC products that immediately disrupt users with heavy-handed access controls, ForeScout CounterACT can be deployed in a phased approach which minimizes disruption.
- Accelerated results. ForeScout CounterACT provides useful results on day one by giving you visibility to problems on your network. A built-in knowledge base helps you configure security policies quickly and accurately.

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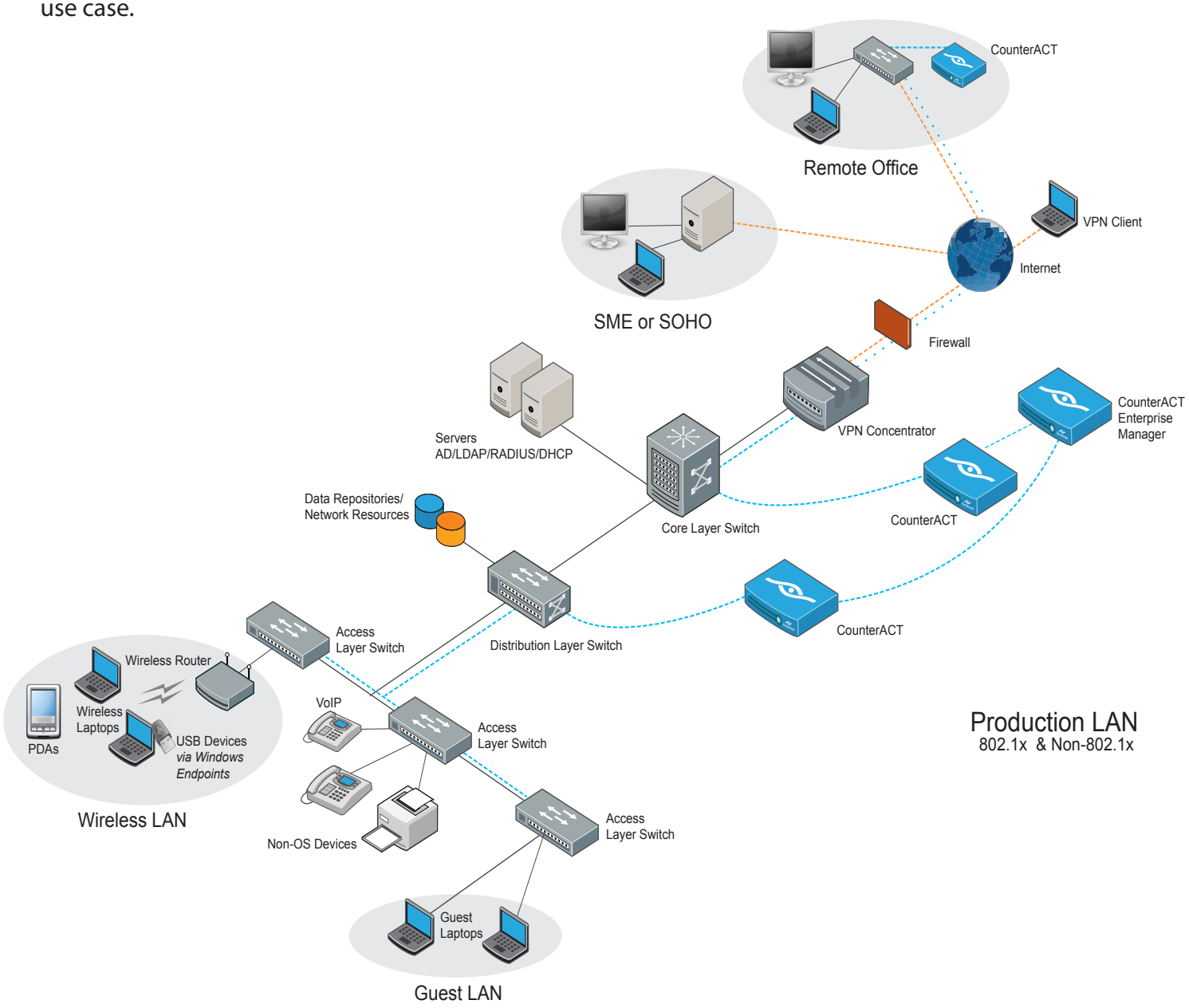
2. How It Works

The drawing below shows a typical deployment. ForeScout CounterACT is an appliance which sits out-of-band on the network. Each appliance attaches to a distribution or core switch via a span or mirror port.

Different size appliances are available to meet the needs of any size organization, and can scale to 400,000 endpoints. Small, remote offices might not need any CounterACT appliance, depending on the customer's use case.



Once it has been installed, CounterACT monitors network traffic and can see a device the moment it tries to access your network. CounterACT automatically grants access based on who the user is, what the device is, and the security posture of the device. After the device has been allowed onto the network, CounterACT can limit where the user can go on the network, and CounterACT can fix security problems on the endpoint. CounterACT continuously protects the network by monitoring the behavior of all devices and blocking attacks.

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After installing CounterACT, network administrators use the built-in knowledge base and wizards to define security policies that are appropriate for their organization.

Through a variety of detection mechanisms, CounterACT listens to the traffic on the network, senses when a device attempts to join the network, and determines whether the device is a "managed" (corporate-owned) device or an "unmanaged" (guest, contractor or unauthorized) device. CounterACT scans each device to determine its security posture, and blocks the device if it is non-compliant or presents a threat. Based on the policy in place, CounterACT can immediately re-assign guest devices and non-OS devices into suitably designated VLANs. Managed devices are placed in their corresponding VLAN and are granted access to the appropriate network resources.

In case CounterACT finds a device that is non-compliant with security policies, CounterACT can take appropriate action to fix the problem, notify administrators, and/or quarantine the device. CounterACT continues to monitor devices for compliance and threatening behavior while they are connected to the network.

CounterACT gives IT administrators a wide range of actions to choose from, including just-in-time notification to end-users that they have just violated security policy. By tailoring the action to meet the severity of the compliance issue, IT managers can ensure that security does not negatively impact the business.

ALERT & REMEDIATE	RESTRICT ACCESS	MOVE & DISABLE
Open trouble ticket	Deploy a Virtual Firewall around an infected or non-compliant device	Reassign device from production VLAN to quarantine VLAN
Send email notification	Reassign the device into a VLAN with restricted access	Block access with 802.1X
SNMP Traps	Update access lists (ACLs) on switches, firewalls and routers to restrict access	Alter login credentials to block access
Syslog	Automatically move device to a pre-configured guest network	Block access with device authentication
HTTP browser hijack		Turn off switch port (802.1X or SNMP)
Auditable end-user acknowledgement		Terminate unauthorized applications
Self-remediation		Disable peripheral device
Integrate with SMS, WSUS, SCCM, Lumension, BigFix		

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3. Evaluation Plan

Now that we have told you what ForeScout CounterACT can do and how it works, it is time for you to see it for yourself. Here is a guide to streamline your evaluation process:

1. Install CounterACT on your network per the instructions in chapter 4 of this document. If you want to test CounterACT's ability to see and control devices on your network, you will need to attach the appliance to a live switch on network containing endpoint devices.
2. Review the points of interest as outlined in Chapter 5. CounterACT lets you automatically enforce many different types of security policies. Creation of the security policies is done using a policy wizard. Chapter 5 walks you through a few of the built-in policy templates, which represent the five most common usage modes as described in Chapter 1.
3. Observe what CounterACT is telling you about your test network. By default, the policies are implemented in "monitor" mode, which means the product tells you what is going on but takes no action. This is a best practice which our customers follow in the real-world. Many customers find that the information alone is worth the price of the product.
4. Turn on enforcement actions. This is an optional step which you can take if you want to actually see CounterACT control network access or remediate endpoint deficiencies.

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4. Appliance Installation

In this evaluation, the product is setup as two components:

- ***ForeScout CounterACT Appliance (physical or virtual)***
- ***CounterACT Management Console (management and licensing application)***

The installation requires Internet connectivity for the ForeScout software to see the licensing server. Details for initial configuration of the product and doing an inventory of a network (and associated domain) are included below. For this evaluation, the product will be setup in Layer 3 mode, where it keeps track of devices via their IP address.

The only other equipment needed for the evaluation is a switch and its associated network with DHCP server.

The installation consists of placing the appliance and switch on a network and giving it the necessary information to perform the NAC function, like logins to domain servers. The switch providing the network information to the ForeScout CounterACT appliance needs to be configured to forward spanned traffic to the appliance.

After installing the product, you should configure at least two policies if you want to see the product in action: the policy for network visibility, and the policy for guest networking. These policies are described in Chapter 5. Other policies which you may wish to setup are also described in Chapter 5.

Configure Your Switch for Traffic Monitoring

ForeScout CounterACT monitors and interacts with traffic from switches using multiple connections:

1. **Monitor Port (no IP address required):** A monitor/span/mirror of traffic from the switch.
    a. **Single VLAN:** In the simplest case, the traffic will be from a single VLAN. Be sure to mirror traffic in both (in/out) directions.
    b. **Multiple VLAN:** If the traffic is from more than one VLAN, the span port must be configured so the traffic is 802.1q encoded. . Be sure to mirror both (in/out) directions
2. **Management & Response Port (One IP Address on the local LAN and port 13000/TCP access from machines that will be running the CounterACT Console Management application).** The CounterACT Appliance responds to traffic using this port. Its configuration depends upon the traffic being spanned.
    a. **Single VLAN:** When the spanned traffic is from a single VLAN, the response port must be a member of the same VLAN and CounterACT will require a single IP address in that VLAN. This IP can be assigned statically or via DHCP.
    b. **Multiple VLAN:** If, the spanned traffic is VLAN trunked, the response port must also be configured as a 802.1q trunk for the same VLANs. The CounterACT port will require an IP address for each of the VLANs. By default, CounterACT uses DHCP.

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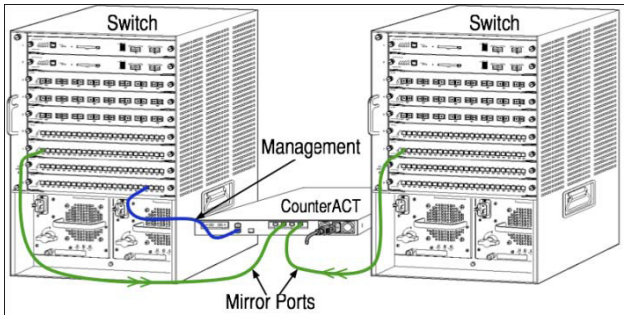

Sample switch configuration, assuming the switch contains multiple VLANs:

Monitor Port	Management & Response Port
• 802.1q encapsulated • interface GigabitEthernet0/2 • description "ForeScout Monitor" • no IP address • switchport • monitor session 1 source VLAN 1, 2 – 100 both • monitor session 1 destination interface Gi0/2 encapsulation dot1q	• 802.1q trunk port • interface GigabitEthernet0/24 • description "ForeScout Response" • IP address A.B.C.D • switchport mode trunk • switchport trunk encapsulation dot1q • switchport trunk allowed VLAN 1 , 2 - 100 • switchport mode trunk • switchport nonegotiate

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Setup and Configure the CounterACT Appliance

The CounterACT physical appliance is identical to the virtual appliance in terms of configuration and operation. The virtual appliance looks to the network like two dedicated IP ports on a VMware ESX server, whereas the physical appliance has the physical ports on the appliance.

Either product requires the following information for setup. It may be helpful to document it here before starting the wizard that kicks off at power up.

Appliance Host Name	
CounterACT Admin Password	
Management Interface	
Appliance IP Address	
Network Mask	
Default Gateway IP Address	
DNS Domain Name	
DNS Server Addresses	

Before proceeding, if you are configuring a physical appliance, please check the version of the software on the appliance. The appliance will show its version number when it boots up, or you can also get it from the "Help – About" section of the user interface. **If the appliance shows a release number earlier than 6.3.4.0, contact your ForeScout representative who will help you upgrade to the latest software.**

If you are installing the Virtual Appliance, see Appendix A for VMware system requirements and installation instructions.

After power up from the VMware console, the console of the virtual machine running the ForeScout CounterACT instance will show the same install wizard as the physical appliance. From there on, the installations are identical, as described below.

Auto-configuration Wizard After Power-Up

After power on, you will be prompted to start configuration with the following message:

```
CounterACT Appliance boot is complete.
Press <Enter> to continue.
```


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1. Press <Enter> to display the following menu:

```
1) Configure CounterACT-6.3.X
2) Restore saved CounterACT-6.3.X
  configuration
3) Identify network interfaces
4) Configure keyboard layout
5) High Availability Setup
6) Turn machine off
Choice (1-6) :1
```

2. Select 1 – Configure 6.3.x. At the prompt **Continue: (yes/no)?** press <Enter> to initiate the setup. The CounterACT Component selection prompt appears.
3. At the prompt **Choice:** select **1** to setup the Appliance.
4. At the prompt **Host name:** Enter a name.
5. At the prompt **Description:** Enter a unique description for this Appliance.
6. At the prompt **CounterACT Appliance Administrator Password:** Enter a password between 6 and 15 characters long and containing at least one non-alphabetic character.

   Note: Logon to the Appliance as root, and logon to the Console as admin.
7. Enter the network parameters as requested, and after each parameter is defined, press <Enter> to continue.

   The DNS server should resolve internal IP addresses. While most internal DNS servers may resolve external addresses as well, some may not. As such, it may be necessary to include an externally-resolving DNS server at the end of the list. Additional servers can be entered in the same line, separated by a space. Almost all DNS queries carried out by CounterACT will be for internal addresses, **so the internal DNS servers should be listed first**.
8. Perform general connectivity tests, reconfigure settings or complete the setup.

   Note: After the installation is complete, an evaluation license is set for 30 days. If you need longer than this, you must install a permanent license before this period expires. You will be contacted via e-mail regarding the expiration date. License installation instructions are included in Appendix A and are the same for the physical and virtual versions of the appliance. You may also was to look at the CounterACT Console User's Manual located on the CounterACT CD in the /docs folder for information about installing the license.
9. Verify Connectivity

   The appliance needs to access the DNS server and the LDAP server. It also needs to see DHCP traffic, and traffic to and from the network endpoints. To verify that the switch's span is properly setup, run the fstool ifcount command at the Appliance for each interface detected.

   ```
   [root@CounterACT root]# fstool ifcount eth0 eth1 eth2
   ```
   (separate each interface by a space.)

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This tool continuously displays network traffic on the specified interfaces. It works in two modes: per interface or per VLAN. The mode can be changed from the display. The total bits per second and the percentage of each of the following traffic categories is shown. **Also verify connectivity to login and management servers using ping.**

Note: By default, the Appliance itself does not reply to ping.

CounterACT Console Installation Completion

To setup the ForeScout CounterACT console, use the installation software built into your Appliance.

1. Open a browser window from the Console computer.
2. Type the following into the browser address line (where the IP address is the address of this Appliance): **http://A.B.C.D/install**.
3. The browser displays the Console installation window. Follow the on-screen instructions.

Log In

After completing the installation,you can log in to the CounterACT Console.

4. Select the CounterACT icon from the shortcut location you created.
5. In the **IP/Name** field, enter the IP address or host name of the Appliance.
6. In the **User Name** field, enter **admin**.
7. In the **Password** field, enter the password you created during Appliance installation.
8. Select **Login** to open Console.

Setup Communication to Network Resources Using the Wizard

So far, the configuration consists of a mutually communicating monitored switch, a CounterACT Appliance or Virtual Appliance, and a Management console. In the next step, we tell CounterACT about the authentication and management servers on your network. CounterACT uses these network services to help it identify devices, users, and applications. After logging in to the console for the first time, the Initial Setup Wizard will prompt for this information. The Wizard guides you through essential configuration steps to ensure that CounterACT is up and running quickly and efficiently. You may wish to prepare the following information before working with the Setup Wizard:

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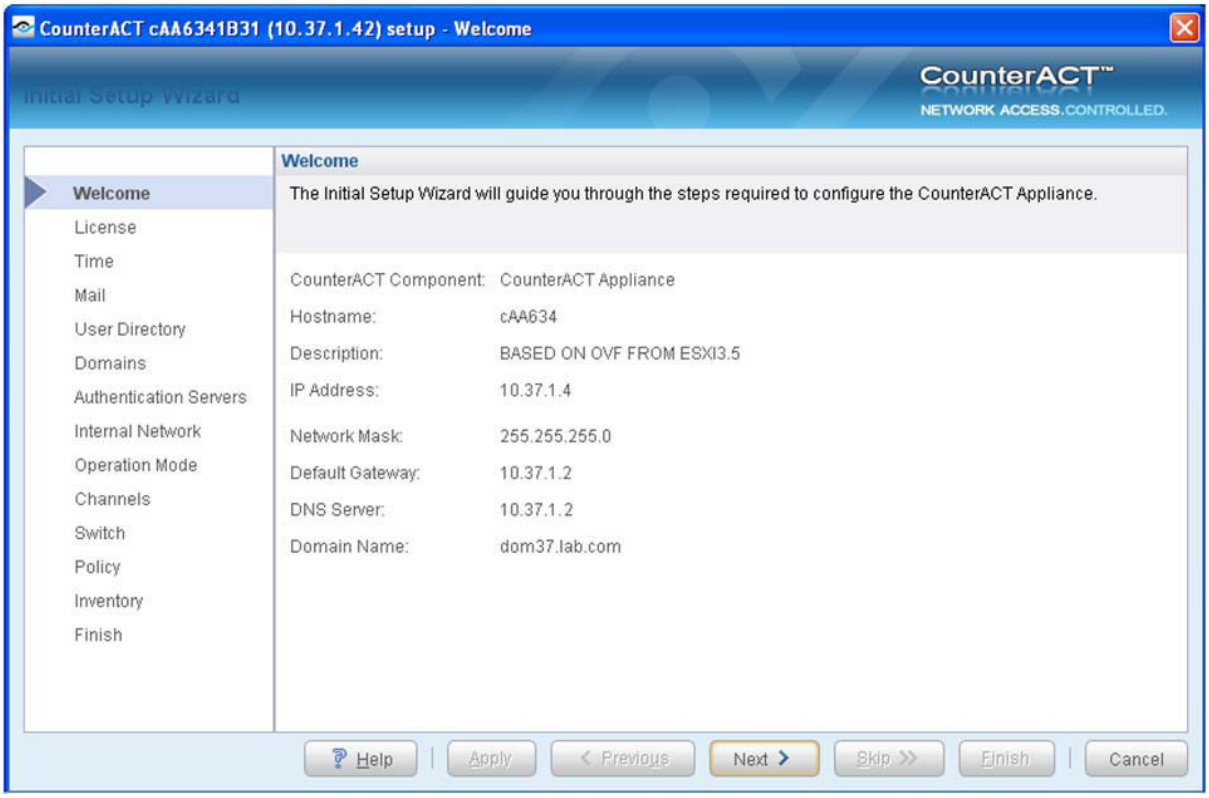
Location of the license file received from your CounterACT Representative (Hardware ships with a 30-day license)	
Switch IP Address, vendor and SNMP Parameters	
Authentication server information	
Domain credentials including, domain administrative account name and password LDAP user account information and the LDAP server IP address.	
Monitor and response interfaces.	
IP address range this Appliance will monitor (all the internal addresses, including unused addresses)	
For segments/VLANs with no DHCP, the network segment/VLANs to which the response interface is directly connected and a permanent IP address to be used by the Appliance at each such VLAN.	

The Setup Wizard

Here is the first screen of the wizard. It will guide you through the entries.



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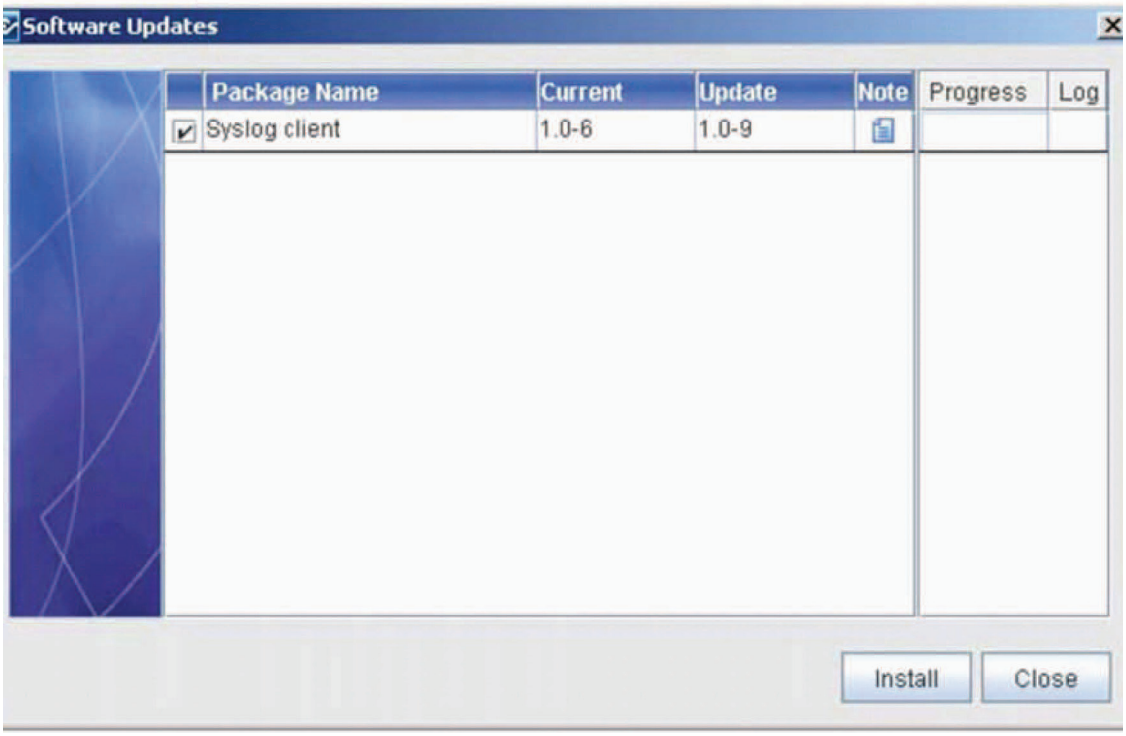
Update the Plugins

CounterACT includes several "plugins" which allow it to communicate with external devices such as switches and endpoints. CounterACT automatically checks to see if updates are available.

The **Plugin Updates** icon appears on the status bar of the Console when updates are available.

If you see the icon above, do the following to update your plugins:

1. Double-click the **Plugin Updates** icon. The **Update Software Installation** dialog box opens. The dialog box displays available plugin updates.



2. Select all plugins and then select the **Install** button.

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5. Points of Interest

Ease of Installation

As described in **Chapter 1**, ForeScout CounterACT is easier to install than most other network access control products. Everything is contained in one appliance, there is no software to install, no changes to be made to the network, etc. This is probably the single most important reason why ForeScout CounterACT has achieved so much success in the market.

The rest of this chapter will guide you in the implementation of some commonly used policies. These policies tell CounterACT what to look for, and how to react. They are the heart of CounterACT's automated security system.

Network Visibility

Some network access control products "shoot first and ask questions later". This is disruptive to users, and it is does not help IT security managers win any popularity contests.

ForeScout CounterACT takes a different approach. It starts by giving IT security managers visibility to everything on their network, then it lets them choose from a wide range of actions to remediate the problem. (More on the range of actions later.)

The first policy setup tells CounterACT that you want it to start identifying devices. Here is some of the information that CounterACT can show you about devices on your network:

Device Information

- Device type (printer, wireless network device, laptop, etc.)
- Device authentication/NETBIOS/domain membership
- MAC/IP address
- NIC vendor
- Hostname

Security Status

- Anti-malware agents status (installed/running) and database versions
- Patch management agent status (installed/running)
- Firewall status (installed/running)
- Audit trail of changes to OS/configuration/ application

User Information

- Username
- Full name
- Authentication status
- Workgroup
- Email address
- Phone number
- Guest/authentication status Device Information
- Device type (printer, wireless network device, laptop, etc.)
- Device authentication/NETBIOS/domain membership
- MAC/IP address
- NIC vendo

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Operating System Status

- Type
- Version number
- Patch level
- Processes and services installed or running
- Registry and configuration
- File name/size/date/version
- Shared directories Security Status
- Anti-malware agents status (installed/running) and database versions
- Patch management agent status (installed/running)
- Firewall status (installed/running)
- Audit trail of changes to OS/configuration/ application

Application Information

- Authorized applications installed/running
- Rogue applications installed/running
- P2P/IM clients Installed/running
- Application name and version number
- Registry values
- File sizes
- Modification date and patch level

Peripheral information

- Device class (disk, printer, DVD/CD, modem, NIC, memory, phone, etc.)
- Connection type (USB, Bluetooth, infrared, wireless, etc.)
- Device information (make, model, device ID, serial number, etc.) Network Traffic Information
- Malicious traffic (worm propagation, device spoofing, intrusion, spam, etc.)
- Traffic source/destination
- Rogue NAT/DHCP behavior

Physical Layer Information

- Switch IP, description, location
- Switch port
- VLAN
- Number of devices on any port
- 802.1x authentication status

Network Traffic Information

- Malicious traffic (worm propagation, device spoofing, intrusion, spam, etc.)
- Traffic source/destination
- Rogue NAT/DHCP behavior

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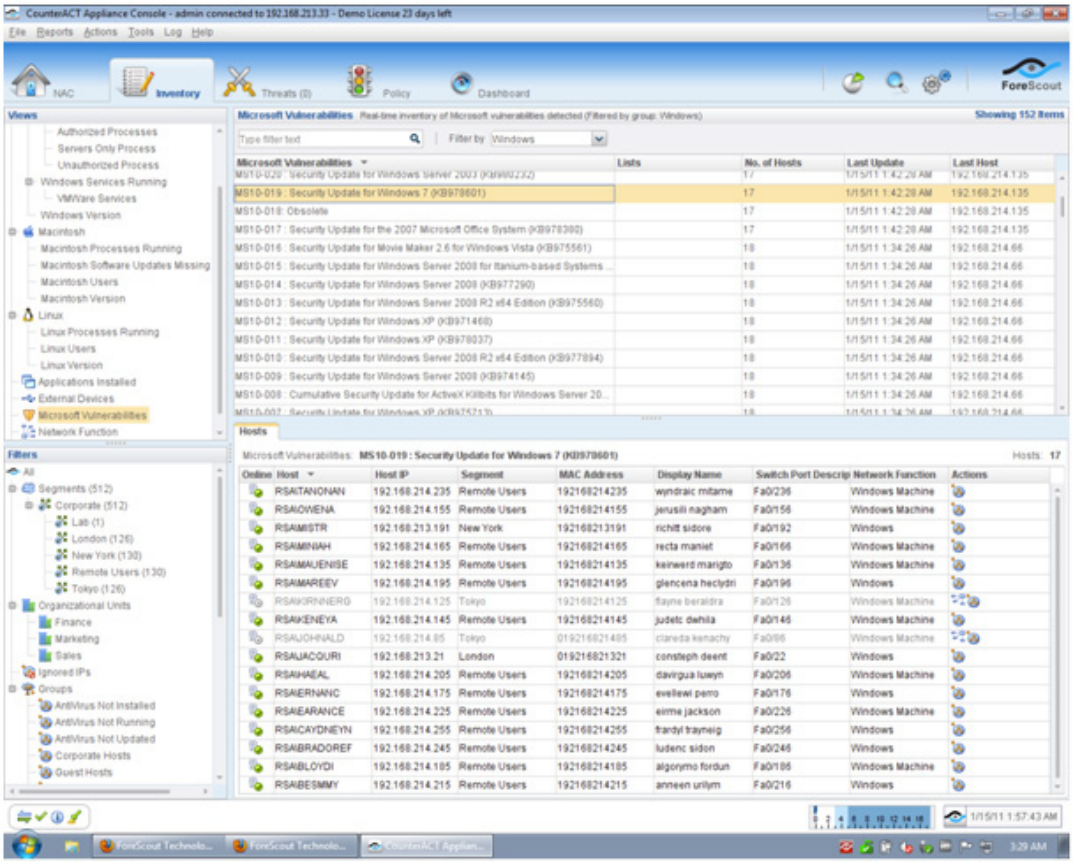
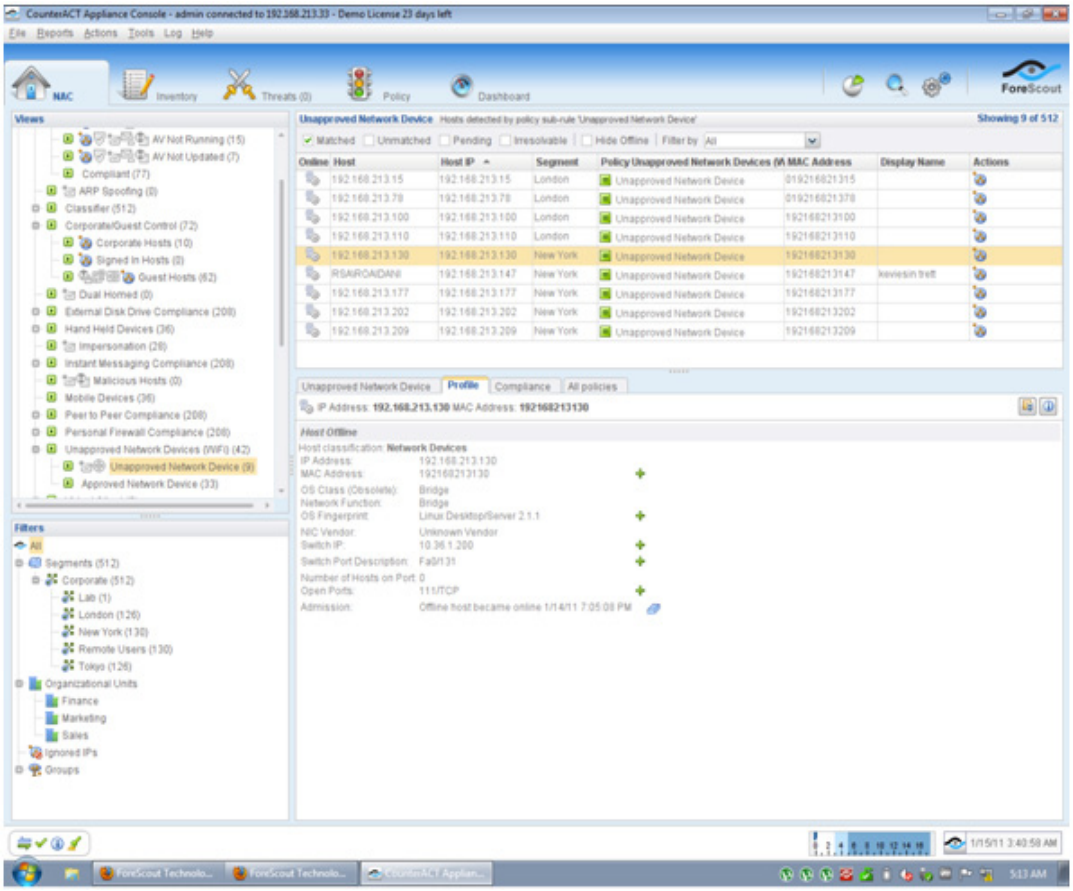
Screenshots *(click to enlarge images)*



Above: ForeScout CounterACT shows you in real time which PCs on your network contain vulnerabilities.



Above: ForeScout CounterACT identifies rogue WiFi devices.

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Step-by-step: Policy for Device Identification

Before CounterACT will display information about devices on your network, it needs to be configured with two policies that it uses to catalog and manage devices. The first is the "Asset Classification" policy. This policy executes before other policies. The asset classification policy identifies what type of device is attached to each switch port. By knowing this, CounterACT ensures that other policies are applied appropriately to each device on the network. For example, CounterACT will not apply an antivirus policy to a printer.

The second policy that needs to be configured is the "Guest Networking" policy. This allows CounterACT separately manage devices that do not have accounts in the domain or authentication system.

CounterACT ships with policy wizards and a knowledgebase of device characteristics. Below is a description of how you would use one of the policy wizards to allow CounterACT to classify network devices by type of device.

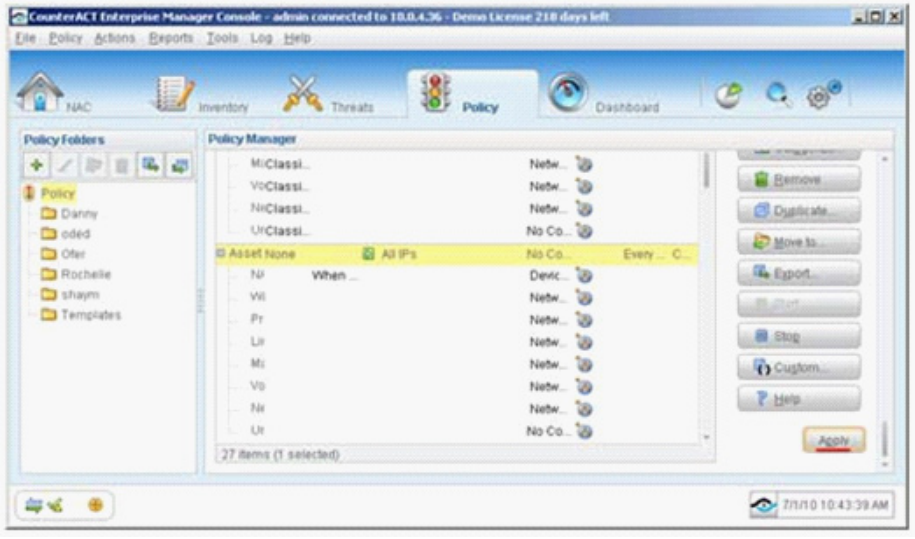
Each policy wizard follows the following structure to setup:

- Each policy has a default name that describes its purpose.
- One click on "All" in the address selection window chooses all addresses
- Sub policies can be selected as desired
- The policy is "Activated" and "Accepted"

Setup the policy for device identification

Select the Asset Classification Template

1. Log into the CounterACT Console.
2. On the Console toolbar select the **Policy** icon shown by a traffic light. The Policy Manager pane opens.



3. In the Policy Manager pane select **Add**. The Policy Wizard opens guiding you through policy creation
4. Expand the Classification folder and select the **Asset Classification** template.
5. Select **Next**. The Policy Name pane opens. A default policy name appears.

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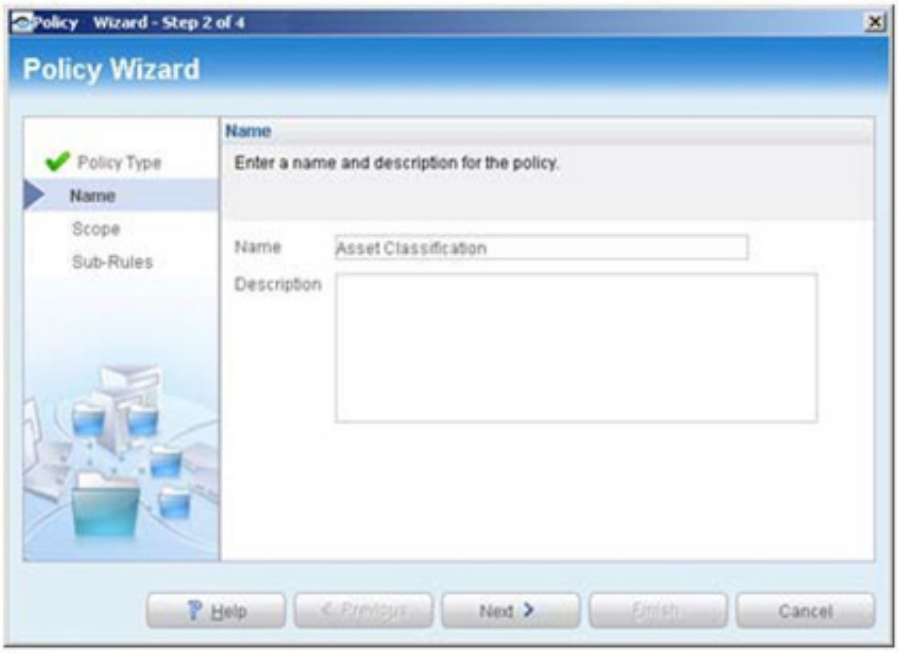
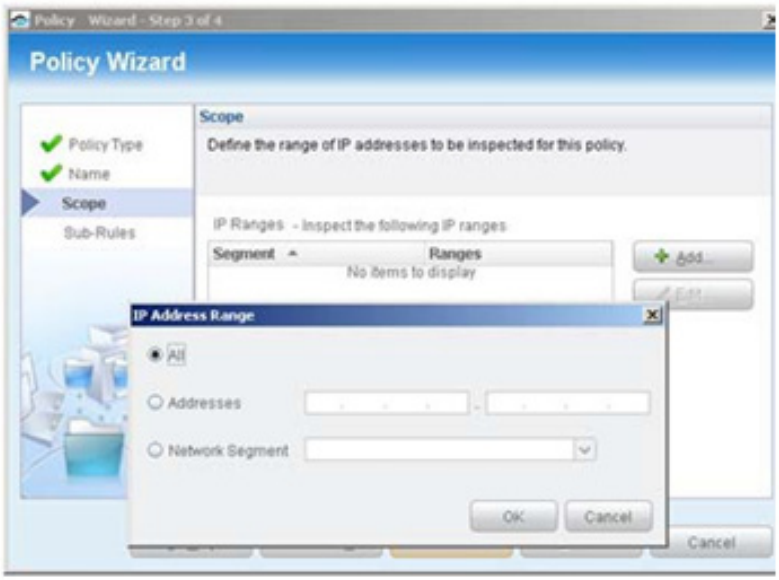


Select **Next**. The Scope pane and the IP Address Range dialog box open.

Choose the Hosts to Inspect

1. Use this IP Address Range dialog box to insert the range of IP addresses you want to inspect or select a network segment.



Select **All** to include all addresses in the Internal Network range. These addresses must be within the Internal Network range defined when CounterACT was set up.

2. Select **OK**. The added range is displayed in the Scope list to be inspected.
3. Select **Next**. The Sub-Rules pane opens.

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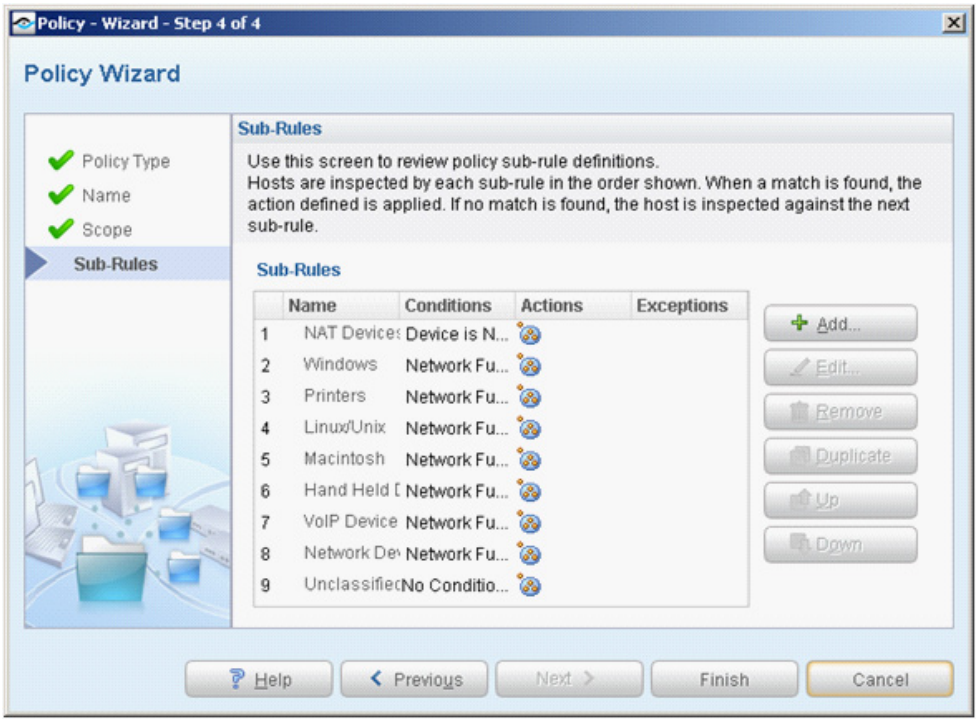
Finish Policy Creation

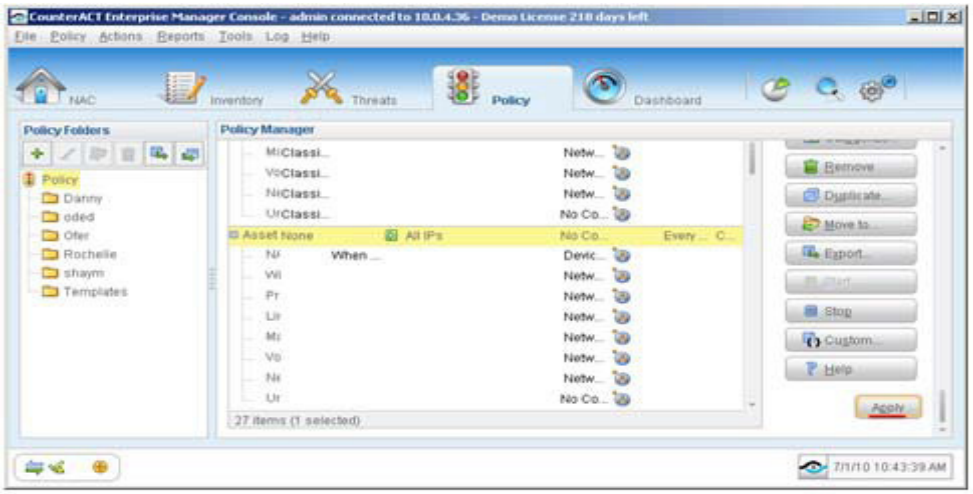
The policy sub-rules are displayed in the Sub-Rules pane. Rules instruct CounterACT how to detect hosts (Conditions) and what to do when a device of that condition is found (Actions).



1. Select **Finish**. The policy automatically appears highlighted in the Policy Manager pane, where it can be activated.

Activate the Policy

1. Select the policy from the Policy Manager pane.



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2. Select **Apply**.
3. A series of confirmation dialog boxes open. Confirm accordingly. On completion, your policy is activated.

CounterACT can now detect and categorize different types of assets on your network.

Create a Guest Networking Policy

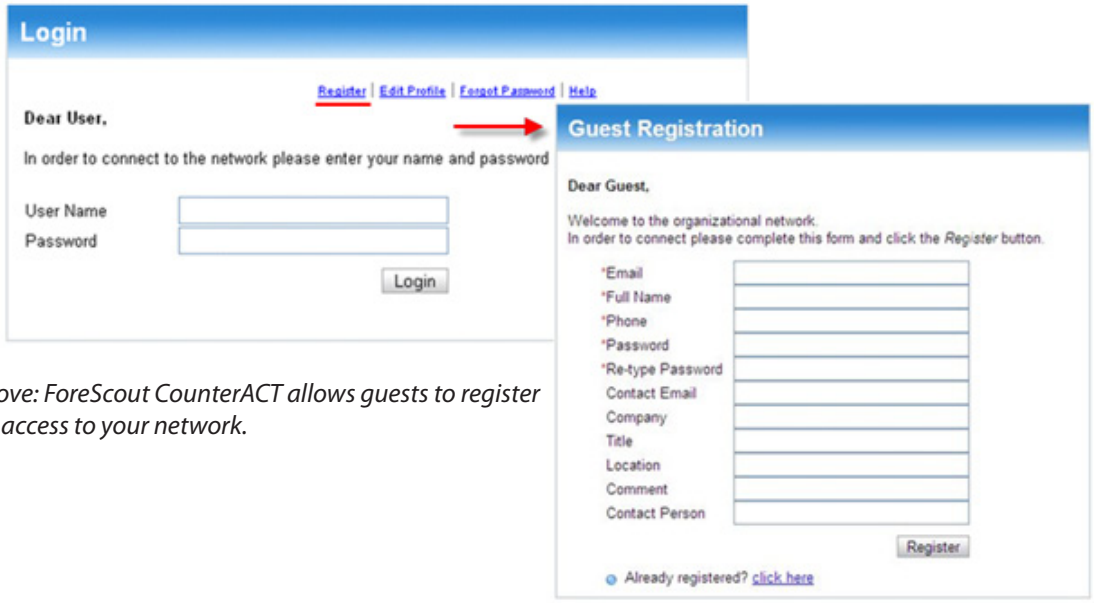
One of the most popular uses for ForeScout CounterACT is to control the network access of guests and contractors. (See "Guest Networking" in the overview section of this document.) This policy also needs to be present on the machine for unauthorized devices to be identified and classified.

When guests and contractors visit an office, they bring their own computers. To remain productive, they need to access the Internet. Contractors may need more than Internet access, they may need access to certain resources on the network. For example, auditors need access to the financial records and accounting systems. If you leave network ports in conference rooms and work cubes in the "open" state, guests may access your network by simply plugging into the wall. However, this is dangerous because the guest's device might have malware on it, and the guest may try to access sensitive data on your network.

ForeScout CounterACT solves this problem. CounterACT can automatically provide network access for guests and contractors, without compromising internal network security. Automation relieves IT managers from administrative burden.

ForeScout CounterACT includes a built-in guest registration system which allows guests to register for access to your network. ForeScout CounterACT can automatically approve guest registration requests, or the request can be routed to one or more individuals in your organization for approval. After admitting a guest device onto the network, CounterACT will limit network access as defined within the CounterACT policy engine, such as:

- Internet-only access
- Full network access
- Limited network access based on who the guest is (e.g. a particular contractor)



Above: ForeScout CounterACT allows guests to register for access to your network.

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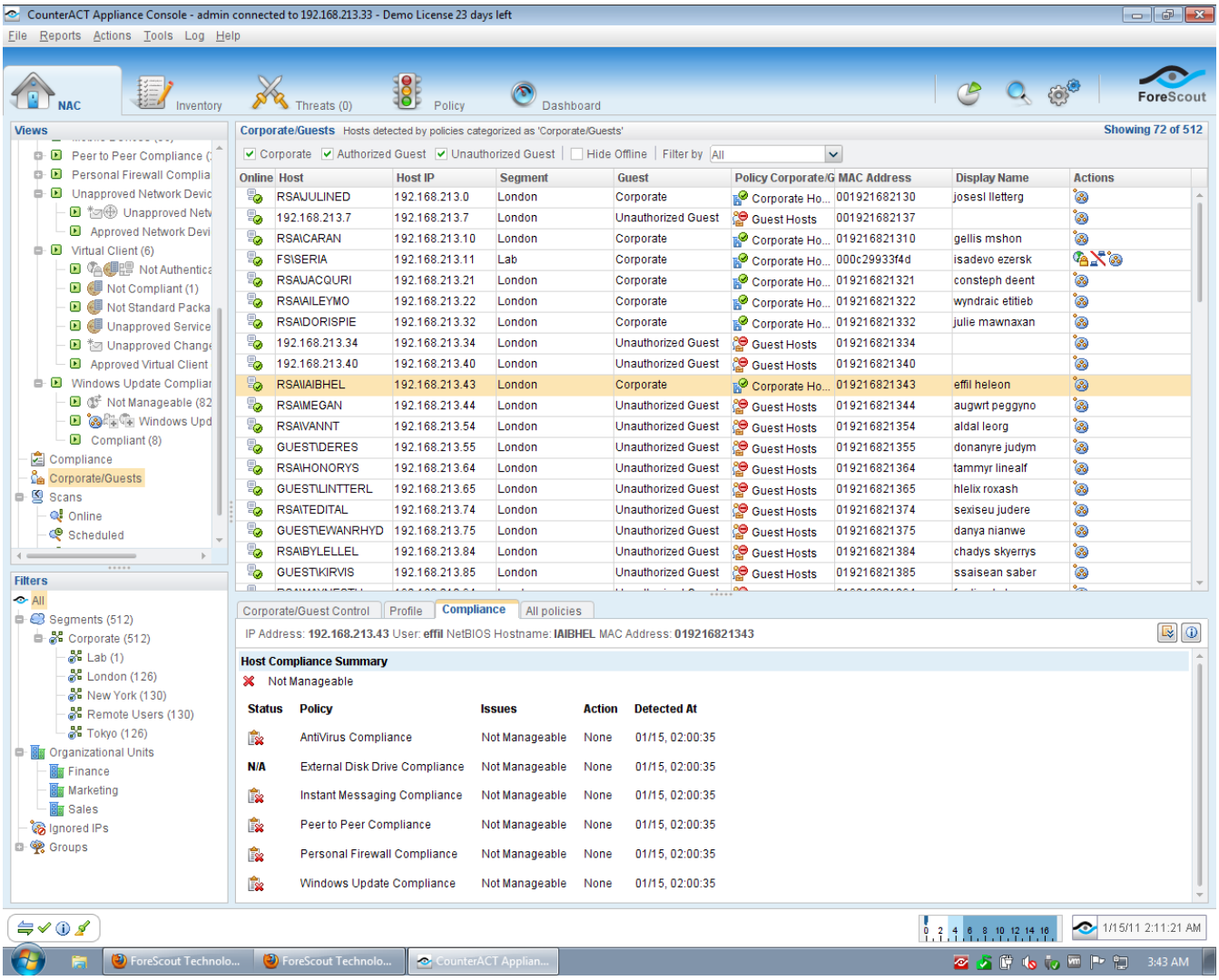
Screenshot *(click to enlarge image)*


CounterACT Appliance Console - admin connected to 192.168.213.33 - Demo License 23 days left
File Reports Actions Tools Log Help
NAC
Inventory
Threats (0)
Policy
Dashboard
ForeScout
Views
Corporate/Guests
Hosts detected by policies categorized as 'Corporate/Guests'
Showing 72 of 512
Corporate
Authorized Guest
Unauthorized Guest
Hide Offline
Filter by
All
Online
Host
Host IP
Segment
Guest
Policy Corporate/G
MAC Address
Display Name
Actions
RSA\JULINED 192.168.213.0 London Corporate Corporate Ho... 001921682130 josesl lletterg
192.168.213.7 192.168.213.7 London Unauthorized Guest Guest Hosts 001921682137
RSA\CARAN 192.168.213.10 London Corporate Corporate Ho... 019216821310 gellis mshon
FS\SERIA 192.168.213.11 Lab Corporate Corporate Ho... 000c29933f4d isadevo ezersk
RSA\JACQURI 192.168.213.21 London Corporate Corporate Ho... 019216821321 consteph deent
RSA\AILEYMO 192.168.213.22 London Corporate Corporate Ho... 019216821322 wyndraic etitieb
RSA\DORISPIE 192.168.213.32 London Corporate Corporate Ho... 019216821332 julie mawnaxan
192.168.213.34 192.168.213.34 London Unauthorized Guest Guest Hosts 019216821334
192.168.213.40 192.168.213.40 London Unauthorized Guest Guest Hosts 019216821340
RSA\IAIBHEL 192.168.213.43 London Corporate Corporate Ho... 019216821343 effil heleon
RSA\MEGAN 192.168.213.44 London Unauthorized Guest Guest Hosts 019216821344 augwrt peggyno
RSA\VANNT 192.168.213.54 London Unauthorized Guest Guest Hosts 019216821354 aldal leorg
GUEST\DERES 192.168.213.55 London Unauthorized Guest Guest Hosts 019216821355 donanyre judym
RSA\HONORYS 192.168.213.64 London Unauthorized Guest Guest Hosts 019216821364 tammyr linealf
GUEST\LINTTERL 192.168.213.65 London Unauthorized Guest Guest Hosts 019216821365 hlelix roxash
RSA\TEDITAL 192.168.213.74 London Unauthorized Guest Guest Hosts 019216821374 sexiseu judere
GUEST\EWANRHYD 192.168.213.75 London Unauthorized Guest Guest Hosts 019216821375 danya nianwe
RSA\BYLELLEL 192.168.213.84 London Unauthorized Guest Guest Hosts 019216821384 chadys skyerrys
GUEST\KIRVIS 192.168.213.85 London Unauthorized Guest Guest Hosts 019216821385 ssaisean saber
Filters
Corporate/Guest Control
Profile
Compliance
All policies
IP Address: 192.168.213.43 User: effil NetBIOS Hostname: IAIBHEL MAC Address: 019216821343
Host Compliance Summary
Not Manageable
Status
Policy
Issues
Action
Detected At
AntiVirus Compliance Not Manageable None 01/15, 02:00:35
N/A External Disk Drive Compliance Not Manageable None 01/15, 02:00:35
Instant Messaging Compliance Not Manageable None 01/15, 02:00:35
Peer to Peer Compliance Not Manageable None 01/15, 02:00:35
Personal Firewall Compliance Not Manageable None 01/15, 02:00:35
Windows Update Compliance Not Manageable None 01/15, 02:00:35
1/15/11 2:11:21 AM
3:43 AM

Above: ForeScout CounterACT gives you real-time visibility to who is on your network, including the location and security posture of guest computers.

Step-by-step: Policy for Guest Networking

Before CounterACT will register and control guest devices on your network, it needs to be configured with a guest registration policy. Below is a description of how you would use one of the policy wizards to allow CounterACT to classify network devices by type of device.

Select the Corporate/Guest Control Template

1. Log into the CounterACT Console.
2. On the Console toolbar, select the **Policy** icon. The Policy Manager opens. Choose **Add**. Choose **Guest Networking**.
3. Name the policy, and identify its network applicability as "All".
4. A new windows appears for defining corporate hosts.

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Define Corporate Host Criteria

Hosts automatically become members of the Corporate Hosts group if they belong to a corporate domain or recently authenticated to an approved server.

1. Enter domain names in the **NetBIOS Domain Names** field. Separate multiple domain names with commas.
2. Select **Next**. The Guest pane opens.

Policy Wizard - Step 4 of 6
Policy Wizard
Policy Type
Name
Scope
Corporate
Guest
Sub-Rules
Corporate
Hosts that meet specific criteria are classified as Corporate Hosts. Use this pane to fine-tune the corporate criteria.
A host is evaluated as a Corporate Host if one of the following criteria is met:
Host is part of the corporate domain
Host has recently authenticated to an approved authentication server
Fine-tune Corporate Criteria
Also evaluate hosts as Corporate according to their NetBIOS domain names
NetBIOS Domain Names
dom33.lab.forescout.com
Enter domain names separated by commas
Help
Previous
Next
Finish
Cancel

Define How to Handle Guest Registration Requests

The default is to approve guest registration requests via email, but it is simpler to just setup with automatic approval as follows:

1. Select **Sign In Guests** and choose **"Automatically approve…"**

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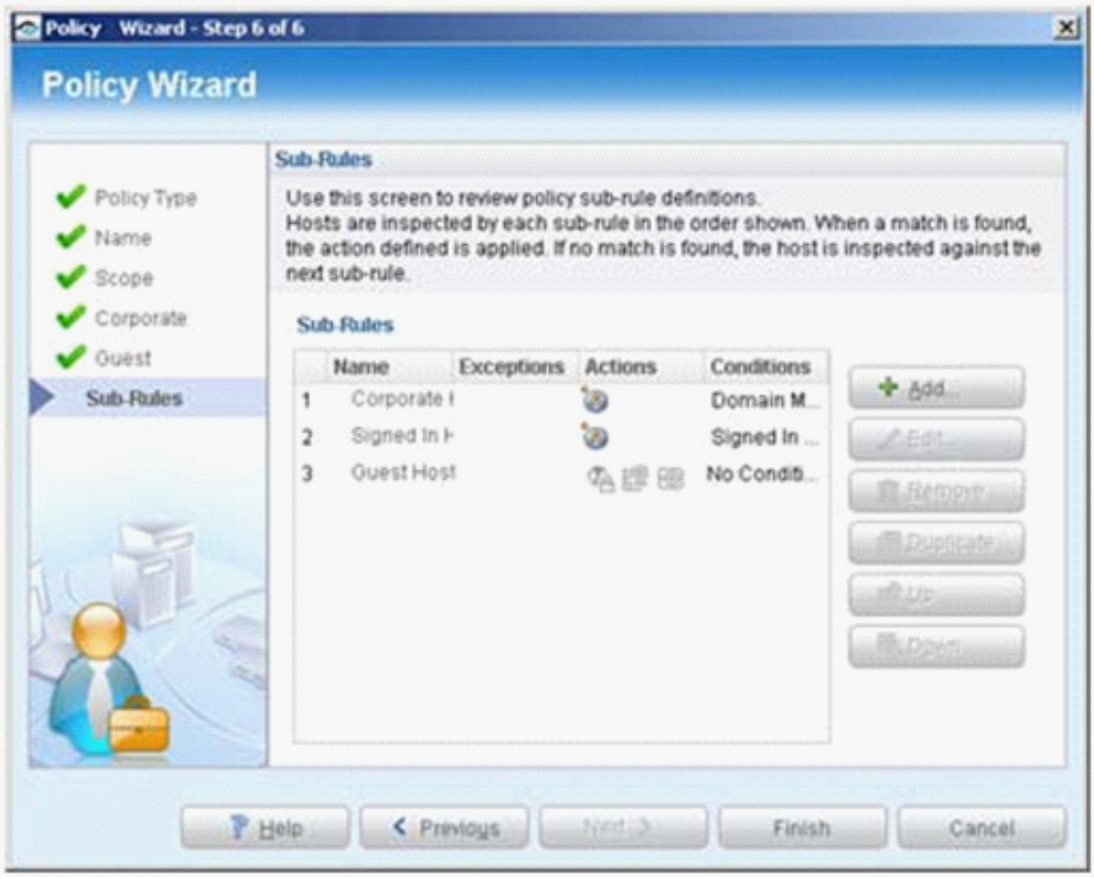
Policy Wizard - Step 5 of 6
Policy Wizard
Policy Type
Name
Scope
Corporate
Guest
Sub-Rules
Guest
Use this pane to define how to handle hosts that are not classified as Corporate Hosts.
Sign In Guests
Prompt unauthorized users with a Sign In page, where they can register as guests. After registration is confirmed and the user is signed in, the host is classified as a Sign
Allow guest registration
Automatically approve all guests after registration.
Request email approval by
Enter emails separated by commas
Fine-tune Registration Options
Let unauthorized users skip Sign In
Help
Previous
Next
Finish
Cancel

2. Select **Next**. The Sub-Rules pane opens.



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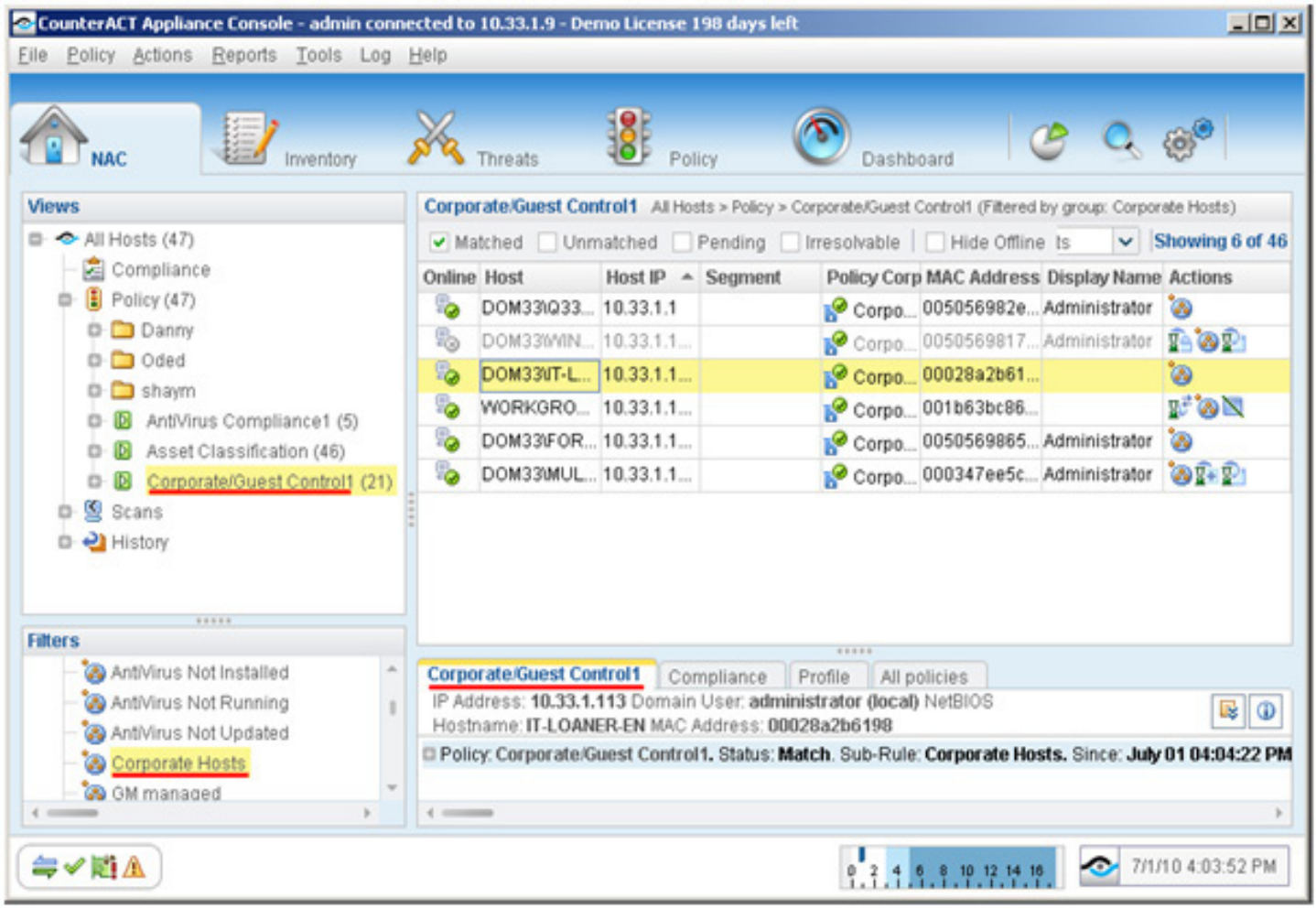
Review SubRules

As with other policies, actions are activated when Finish is selected.

Select **Finish**. The policy automatically appears highlighted in the Policy Manager,where it can be activated. Activate the policy.

Review Corporate/Guest Detections

1. On the Console toolbar, select the NAC icon.
2. In the Views pane, navigate to the Policy folder and select the policy containing your Corporate/ Guest Control policy. The guests are displayed in the Information Panel.


CounterACT Appliance Console - admin connected to 10.33.1.9 - Demo License 198 days left
File Policy Actions Reports Tools Log Help
NAC
Inventory
Threats
Policy
Dashboard
Views
All Hosts (47)
Compliance
Policy (47)
Danny
Oded
shaym
AntiVirus Compliance1 (5)
Asset Classification (46)
Corporate/Guest Control1 (21)
Scans
History
Corporate/Guest Control1 All Hosts > Policy > Corporate/Guest Control1 (Filtered by group: Corporate Hosts)
Matched Unmatched Pending Irresolvable Hide Offline Is
Showing 6 of 46
Online Host Host IP Segment Policy Corp MAC Address Display Name Actions
DOM33\Q33... 10.33.1.1 Corpo... 005056982e... Administrator
DOM33\WIN... 10.33.1.1... Corpo... 0050569817... Administrator
DOM33\IT-L... 10.33.1.1... Corpo... 00028a2b61...
WORKGRO... 10.33.1.1... Corpo... 001b63bc86...
DOM33\FOR... 10.33.1.1... Corpo... 0050569865... Administrator
DOM33\MUL... 10.33.1.1... Corpo... 000347ee5c... Administrator
Filters
AntiVirus Not Installed
AntiVirus Not Running
AntiVirus Not Updated
Corporate Hosts
GM managed
Corporate/Guest Control1 Compliance Profile All policies
IP Address: 10.33.1.113 Domain User: administrator (local) NetBIOS
Hostname: IT-LOANER-EN MAC Address: 00028a2b6198
Policy: Corporate/Guest Control1. Status: Match. Sub-Rule: Corporate Hosts. Since: July 01 04:04:22 PM
7/1/10 4:03:52 PM

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Monitor and Control Mobile Devices

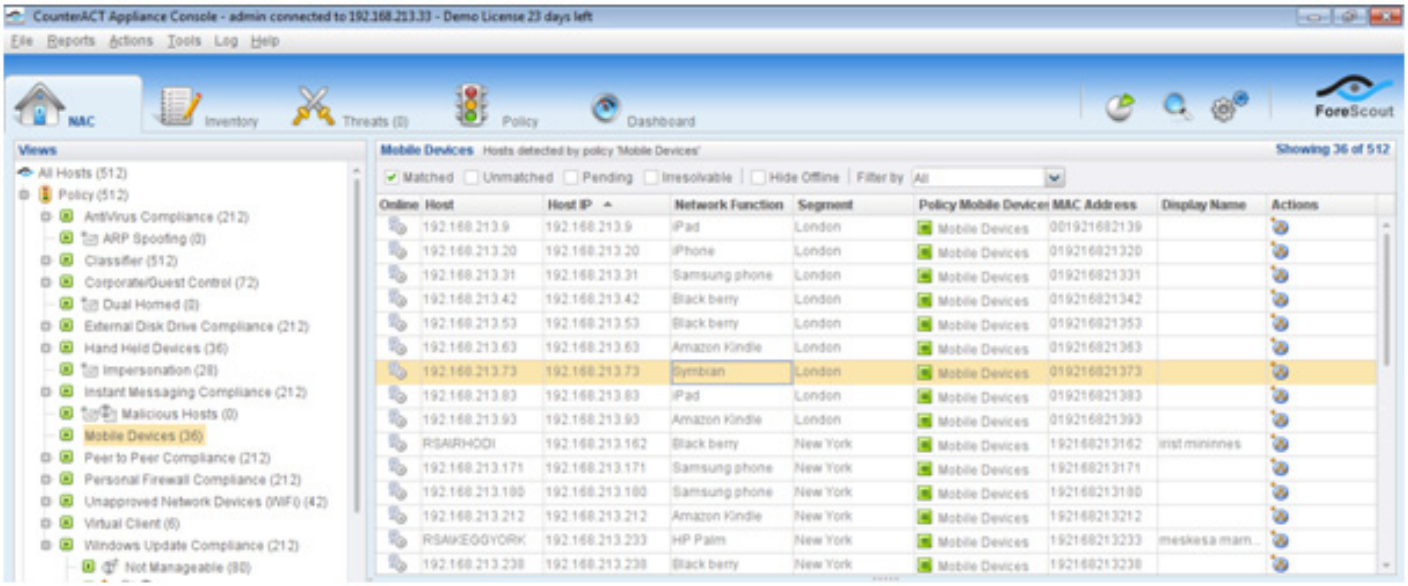
As stated in the introduction, the influx of personal handheld device onto enterprise networks is a hot problem that needs to be solved. Organizations want to accommodate these devices while maintaining security.

ForeScout CounterACT solves this problem. CounterACT can automatically detect and classify mobile devices, and provide access control.

Benefits of ForeScout's solution include:

- Improved productivity. ForeScout CounterACT for Mobile Security empowers workers to use mobile and wireless devices of choice for maximum productivity.
- Improved visibility: ForeScout CounterACT for Mobile Security lets you see who has been on your network, which days, and where they were connecting.
- Better security: ForeScout CounterACT for Mobile Security has three mechanisms to ensure that guests do not threaten the security of your network:
  - » CounterACT limits guest access, preventing them from accessing sensitive resources
  - » CounterACT can ensure that guest devices meet your security policies while they are connected to your network
  - » CounterACT can continuously monitor guest systems to ensure that they do not attack your network.

Screenshot *(click to enlarge image)*


CounterACT Appliance Console - admin connected to 192.168.213.33 - Demo License 23 days left
File Reports Actions Tools Log Help
NAC
Inventory
Threats (0)
Policy
Dashboard
ForeScout
Views
All Hosts (512)
Policy (512)
AntiVirus Compliance (212)
ARP Spoofing (0)
Classifier (512)
Corporate/Guest Control (72)
Dual Homed (0)
External Disk Drive Compliance (212)
Hand Held Devices (36)
Impersonation (28)
Instant Messaging Compliance (212)
Malicious Hosts (0)
Mobile Devices (36)
Peer to Peer Compliance (212)
Personal Firewall Compliance (212)
Unapproved Network Devices (WIFI) (42)
Virtual Client (6)
Windows Update Compliance (212)
Not Manageable (80)
Mobile Devices Hosts detected by policy 'Mobile Devices'
Showing 36 of 512
Matched Unmatched Pending Irresolvable Hide Offline Filter by All
Online Host Host IP Network Function Segment Policy Mobile Devices MAC Address Display Name Actions

Above: ForeScout CounterACT identifies handheld devices on your network – iPhone, iPad, Android, Windows Mobile, Blackberry, Nokia Symbian, and more.

Step-by-step: Policy for Mobile Security

No additional policies need to be created for mobile security. The detection of mobile devices is performed automatically by the policy that you created in the "Network Visibility" section (above). Control of mobile devices is done via the Guest Registration policy that you created.

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Monitor and Enforce Endpoint Compliance

Organizations spend millions on endpoint security tools – such as antivirus, encryption, data loss prevention (DLP), and so on – only to have end users turn off or disable those tools. Even in well-managed enterprises, host-based security tools typically do not work properly on at least 20% of systems. It can be even worse than 20%: Microsoft issued a report in 2008 that indicated that fewer than 50% of their corporate computers were compliant with security policy.

ForeScout CounterACT solves this problem. ForeScout CounterACT can ensure that every endpoint on your network is compliant with your security policy. For example, CounterACT can ensure that antivirus is up-to-date, the operating system is properly patched, and the computer is free of illegitimate software such as P2P. Because ForeScout CounterACT is agentless, it works with all type of endpoints–managed and unmanaged, known and unknown, physical and virtual. CounterACT can discover weaknesses in an existing agent-based security system that would otherwise go undetected.

Unlike agent-based security systems, ForeScout CounterACT operates in real-time, has no blind spots, and does not require cooperation from the endpoint.

Furthermore, CounterACT gives IT administrators a wide range of actions to choose from, including just-in-time notification to end-users that they have just violated security policy. By tailoring the action to meet the severity of the compliance issue, IT managers can ensure that security does not negatively impact the business.

Screenshot *(click to enlarge image)*

Above: ForeScout CounterACT dashboard shows you compliance trends over time.

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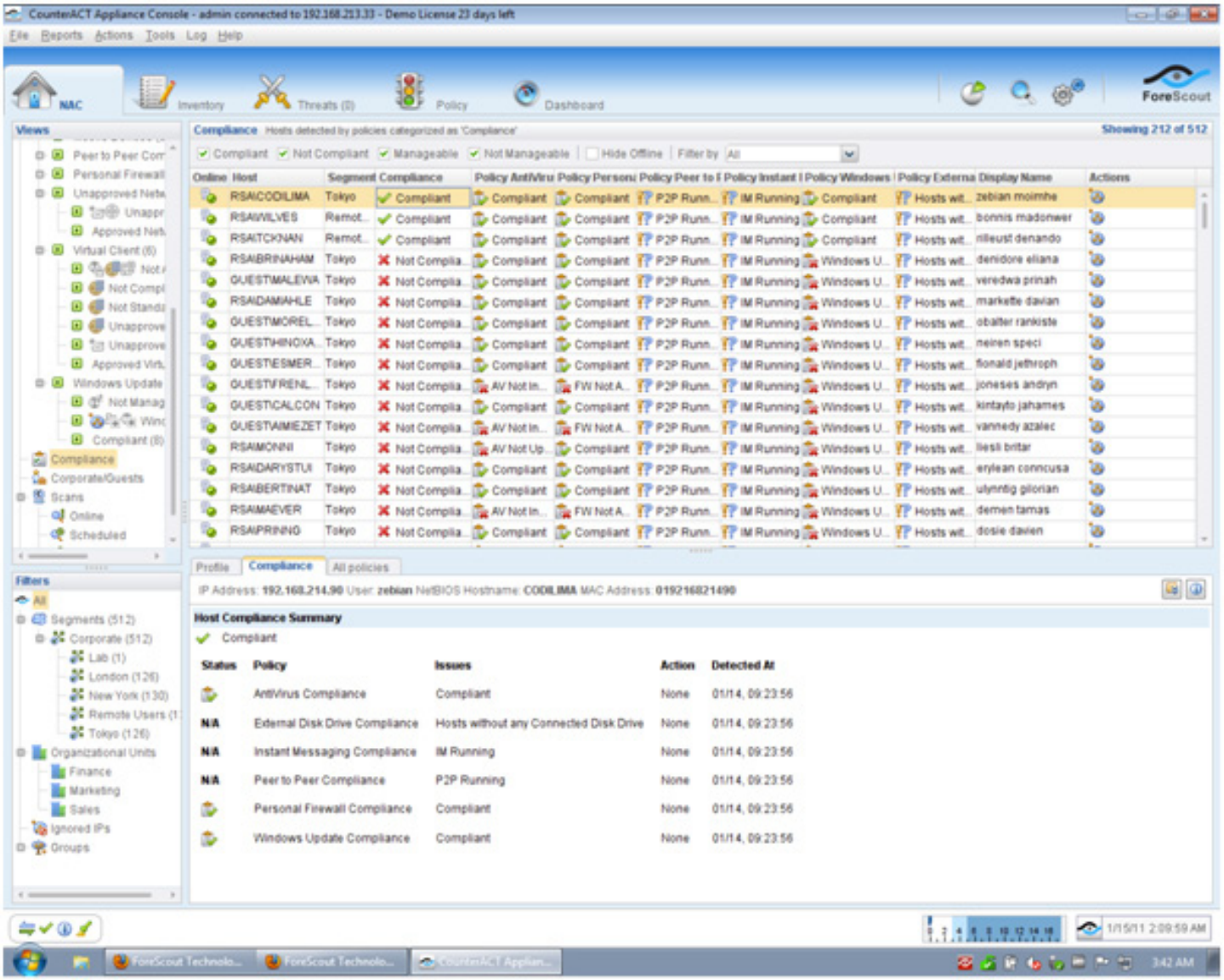
Screenshot *(click to enlarge image)*



Above: ForeScout CounterACT identifies security gaps on your network, such as security agents that are not working or not up-to-date.

Above: ForeScout Compliance Center shows end user whether their computers are compliant with corporate security policies.

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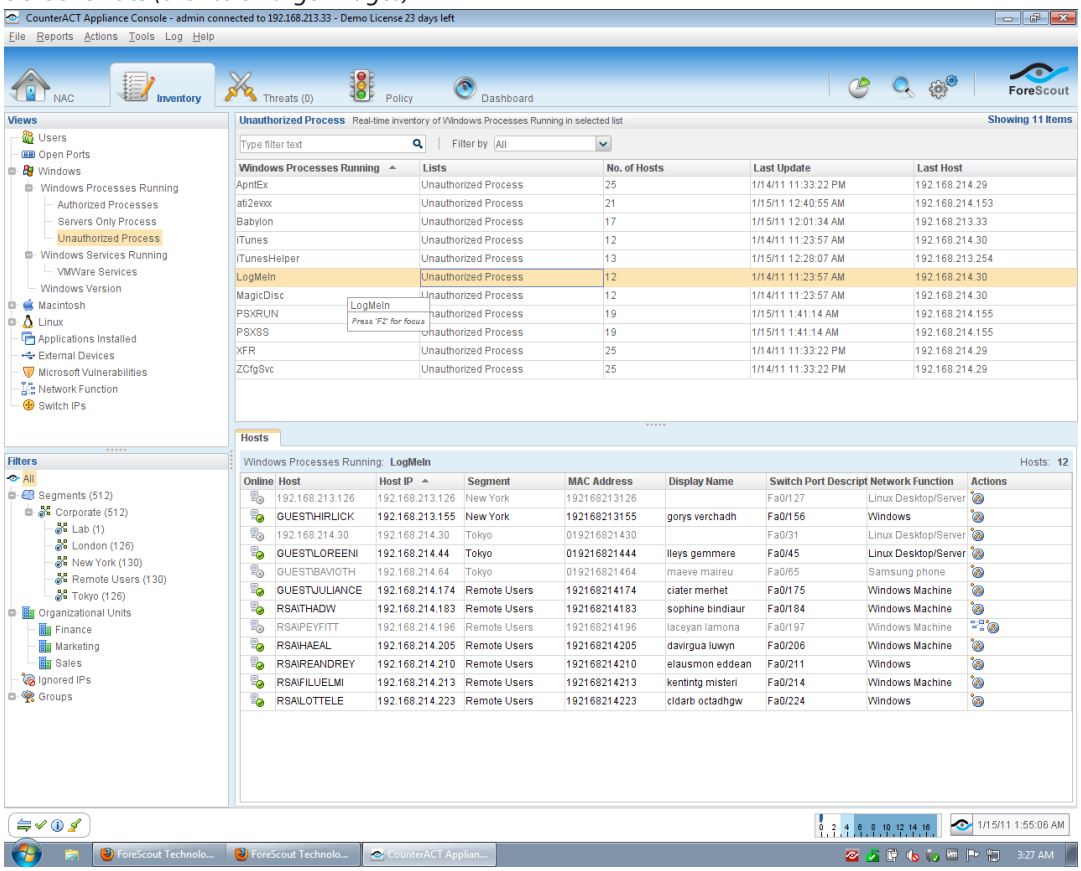
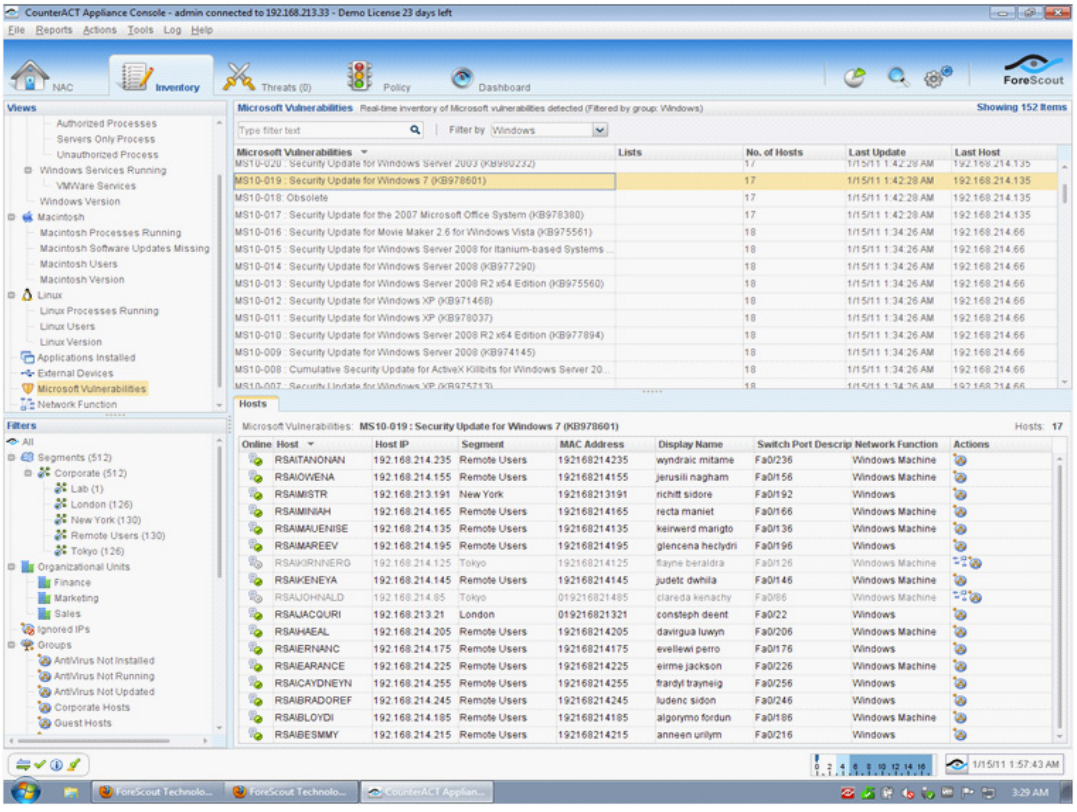
Screenshots *(click to enlarge images)*


CounterACT Appliance Console - admin connected to 192.168.213.33 - Demo License 23 days left
File Reports Actions Tools Log Help
NAC
Inventory
Threats (0)
Policy
Dashboard
ForeScout
Views
Users
Open Ports
Windows
Windows Processes Running
Authorized Processes
Servers Only Process
Unauthorized Process
Windows Services Running
VMWare Services
Windows Version
Macintosh
Linux
Applications Installed
External Devices
Microsoft Vulnerabilities
Network Function
Switch IPs
Unauthorized Process
Real-time inventory of Windows Processes Running in selected list
Showing 11 Items
Type filter text
Filter by All
Windows Processes Running
Lists
No. of Hosts
Last Update
Last Host
ApntEx Unauthorized Process 25 1/14/11 11:33:22 PM 192.168.214.29
ati2evxx Unauthorized Process 21 1/15/11 12:40:55 AM 192.168.214.153
Babylon Unauthorized Process 17 1/15/11 12:01:34 AM 192.168.213.33
iTunes Unauthorized Process 12 1/14/11 11:23:57 AM 192.168.214.30
iTunesHelper Unauthorized Process 13 1/15/11 12:28:07 AM 192.168.213.254
LogMeIn Unauthorized Process 12 1/14/11 11:23:57 AM 192.168.214.30
MagicDisc Unauthorized Process 12 1/14/11 11:23:57 AM 192.168.214.30
PSXRUN Unauthorized Process 19 1/15/11 1:41:14 AM 192.168.214.155
PSXSS Unauthorized Process 19 1/15/11 1:41:14 AM 192.168.214.155
XFR Unauthorized Process 25 1/14/11 11:33:22 PM 192.168.214.29
ZCfgSvc Unauthorized Process 25 1/14/11 11:33:22 PM 192.168.214.29
LogMeIn
Press 'F2' for focus
Hosts
Windows Processes Running: LogMeIn
Hosts: 12
Online Host Host IP Segment MAC Address Display Name Switch Port Descript Network Function Actions
192.168.213.126 192.168.213.126 New York 192168213126 Fa0/127 Linux Desktop/Server
GUEST\HIRLICK 192.168.213.155 New York 192168213155 gorys verchadh Fa0/156 Windows
192.168.214.30 192.168.214.30 Tokyo 019216821430 Fa0/31 Linux Desktop/Server
GUEST\LOREENI 192.168.214.44 Tokyo 019216821444 lleys gemmere Fa0/45 Linux Desktop/Server
GUEST\BAVIOTH 192.168.214.64 Tokyo 019216821464 maeve maireu Fa0/65 Samsung phone
GUEST\JULIANCE 192.168.214.174 Remote Users 192168214174 ciater merhet Fa0/175 Windows Machine
RSAITHADW 192.168.214.183 Remote Users 192168214183 sophine bindiaur Fa0/184 Windows Machine
RSAIPEYFITT 192.168.214.196 Remote Users 192168214196 laceyan lamona Fa0/197 Windows Machine
RSAIHAEAL 192.168.214.205 Remote Users 192168214205 davirgua luwyn Fa0/206 Windows Machine
RSAIREANDREY 192.168.214.210 Remote Users 192168214210 elausmon eddean Fa0/211 Windows
RSAIFILUELMI 192.168.214.213 Remote Users 192168214213 kentintg misteri Fa0/214 Windows Machine
RSAILOTTELE 192.168.214.223 Remote Users 192168214223 cldarb octadhgw Fa0/224 Windows
Filters
All
Segments (512)
Corporate (512)
Lab (1)
London (126)
New York (130)
Remote Users (130)
Tokyo (126)
Organizational Units
Finance
Marketing
Sales
Ignored IPs
Groups
1/15/11 1:55:06 AM
3:27 AM

Above: ForeScout CounterACT indicates which PCs are running unauthorized processes.


CounterACT Appliance Console - admin connected to 192.168.213.33 - Demo License 23 days left
File Reports Actions Tools Log Help
NAC
Inventory
Threats (0)
Policy
Dashboard
ForeScout
Views
Authorized Processes
Servers Only Process
Unauthorized Process
Windows Services Running
VMWare Services
Windows Version
Macintosh
Macintosh Processes Running
Macintosh Software Updates Missing
Macintosh Users
Macintosh Version
Linux
Linux Processes Running
Linux Users
Linux Version
Applications Installed
External Devices
Microsoft Vulnerabilities
Network Function
Microsoft Vulnerabilities
Real-time inventory of Microsoft vulnerabilities detected (Filtered by group: Windows)
Showing 152 Items
Type filter text
Filter by Windows
Microsoft Vulnerabilities
Lists
No. of Hosts
Last Update
Last Host
MS10-019 : Security Update for Windows 7 (KB978601) 17 1/15/11 1:42:28 AM 192.168.214.135
MS10-018: Obsolete 17 1/15/11 1:42:28 AM 192.168.214.135
MS10-017 : Security Update for the 2007 Microsoft Office System (KB978380) 17 1/15/11 1:42:28 AM 192.168.214.135
MS10-016 : Security Update for Movie Maker 2.6 for Windows Vista (KB975561) 18 1/15/11 1:34:26 AM 192.168.214.66
MS10-015 : Security Update for Windows Server 2008 for Itanium-based Systems 18 1/15/11 1:34:26 AM 192.168.214.66
MS10-014 : Security Update for Windows Server 2008 (KB977290) 18 1/15/11 1:34:26 AM 192.168.214.66
MS10-013 : Security Update for Windows Server 2008 R2 x64 Edition (KB975560) 18 1/15/11 1:34:26 AM 192.168.214.66
MS10-012 : Security Update for Windows XP (KB971468) 18 1/15/11 1:34:26 AM 192.168.214.66
MS10-011 : Security Update for Windows XP (KB978037) 18 1/15/11 1:34:26 AM 192.168.214.66
MS10-010 : Security Update for Windows Server 2008 R2 x64 Edition (KB977894) 18 1/15/11 1:34:26 AM 192.168.214.66
MS10-009 : Security Update for Windows Server 2008 (KB974145) 18 1/15/11 1:34:26 AM 192.168.214.66
MS10-008 : Cumulative Security Update for ActiveX Killbits for Windows Server 20... 18 1/15/11 1:34:26 AM 192.168.214.66
Hosts
Microsoft Vulnerabilities: MS10-019 : Security Update for Windows 7 (KB978601)
Hosts: 17
Online Host Host IP Segment MAC Address Display Name Switch Port Descrip Network Function Actions
RSAITANONAN 192.168.214.235 Remote Users 192168214235 wyndraic mitame Fa0/236 Windows Machine
RSAIOWENA 192.168.214.155 Remote Users 192168214155 jerusili nagham Fa0/156 Windows Machine
RSAIMISTR 192.168.213.191 New York 192168213191 richitt sidore Fa0/192 Windows
RSAIMINIAH 192.168.214.165 Remote Users 192168214165 recta maniet Fa0/166 Windows Machine
RSAIMAUENISE 192.168.214.135 Remote Users 192168214135 keirwerd marigto Fa0/136 Windows Machine
RSAIMAREEV 192.168.214.195 Remote Users 192168214195 glencena heclydri Fa0/196 Windows
RSAIKIRNNERG 192.168.214.125 Tokyo 192168214125 flayne beraldra Fa0/126 Windows Machine
RSAIKENEYA 192.168.214.145 Remote Users 192168214145 judetc dwhila Fa0/146 Windows Machine
RSAIJOHNALD 192.168.214.85 Tokyo 019216821485 clareda kenachy Fa0/86 Windows Machine
RSAIJACQURI 192.168.213.21 London 019216821321 consteph deent Fa0/22 Windows
RSAIHAEAL 192.168.214.205 Remote Users 192168214205 davirgua luwyn Fa0/206 Windows Machine
RSAIERNANC 192.168.214.175 Remote Users 192168214175 evellewi perro Fa0/176 Windows
RSAIEARANCE 192.168.214.225 Remote Users 192168214225 eirme jackson Fa0/226 Windows Machine
RSAICAYDNEYN 192.168.214.255 Remote Users 192168214255 frardyl trayneig Fa0/256 Windows
RSAIBRADOREF 192.168.214.245 Remote Users 192168214245 ludenc sidon Fa0/246 Windows
RSAIBLOYDI 192.168.214.185 Remote Users 192168214185 algorymo fordun Fa0/186 Windows Machine
RSAIBESMMY 192.168.214.215 Remote Users 192168214215 anneen urilym Fa0/216 Windows
Filters
All
Segments (512)
Corporate (512)
Lab (1)
London (126)
New York (130)
Remote Users (130)
Tokyo (126)
Organizational Units
Finance
Marketing
Sales
Ignored IPs
Groups
AntiVirus Not Installed
AntiVirus Not Running
AntiVirus Not Updated
Corporate Hosts
Guest Hosts
1/15/11 1:57:43 AM
3:29 AM

Above: ForeScout CounterACT indicates in real time which PCs on the network contain vulnerabilities

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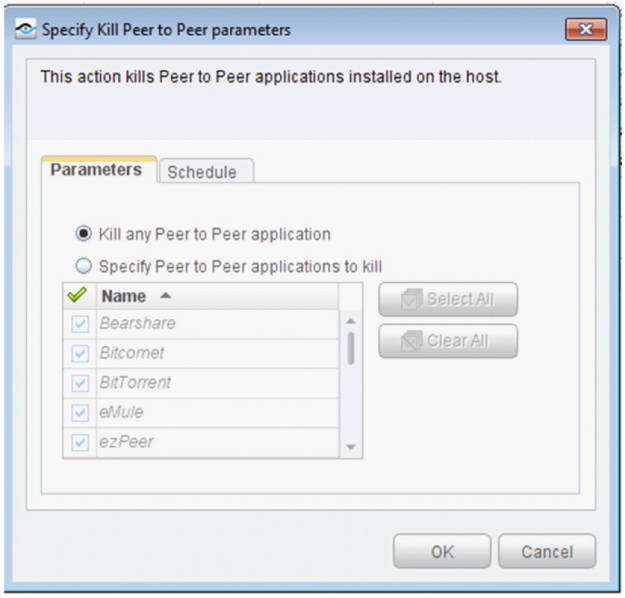
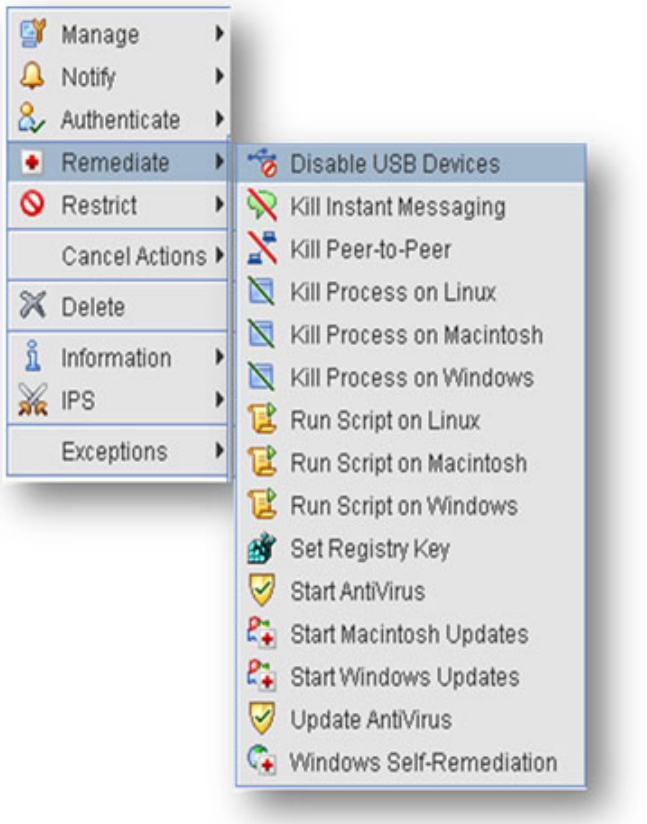


On the left: ForeScout CounterACT makes it easy to kill unauthorized software, such as peer-to-peer.

On the right: ForeScout CounterACT has many options for enforcing policies. It is not limited to dropping an endpoint from the network or putting the device in a restricted VLAN. A few of the remediation options are shown below.



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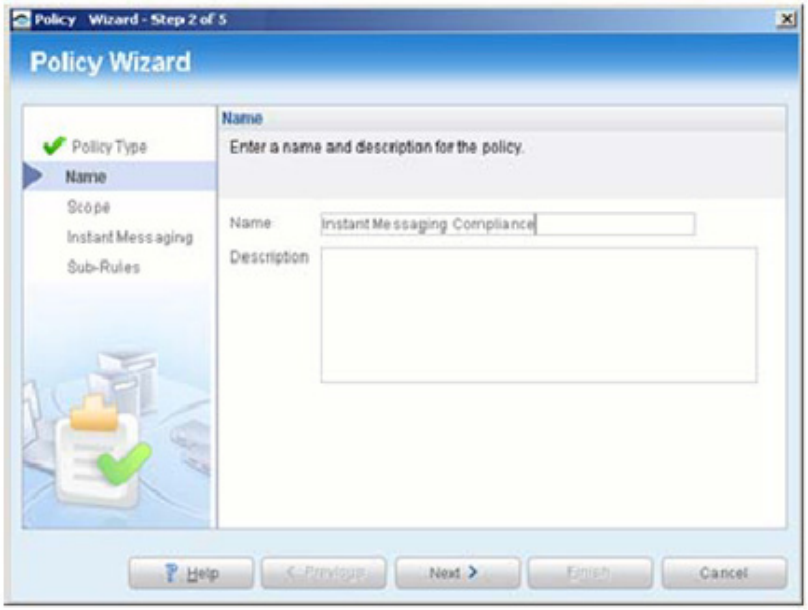
Step-by-step: Policy to Control Unauthorized Application

In this example, you will create a policy for detecting the presence of unauthorized applications such as instant messaging, and you will instruct CounterACT to disable these applications once found.

As with other policies we are testing, this section will guide you through creating, naming, spanning, specifying, and activating a polity.

Click on the "Policy" icon and choose "Add". Choose the Instant Messaging type of policy. (P2P applications have a policy that wil setup the same way as the steps below.) This will force a screen to come up to name it as shown below: Choose the default name for the policy.



After choosing **Next**, the scope of the policy is specified by choosing **All** for all addresses.

Note that there are choices for all types of instant messaging applications, but clicking on the **All** box will limit all the types of IM traffic listed.

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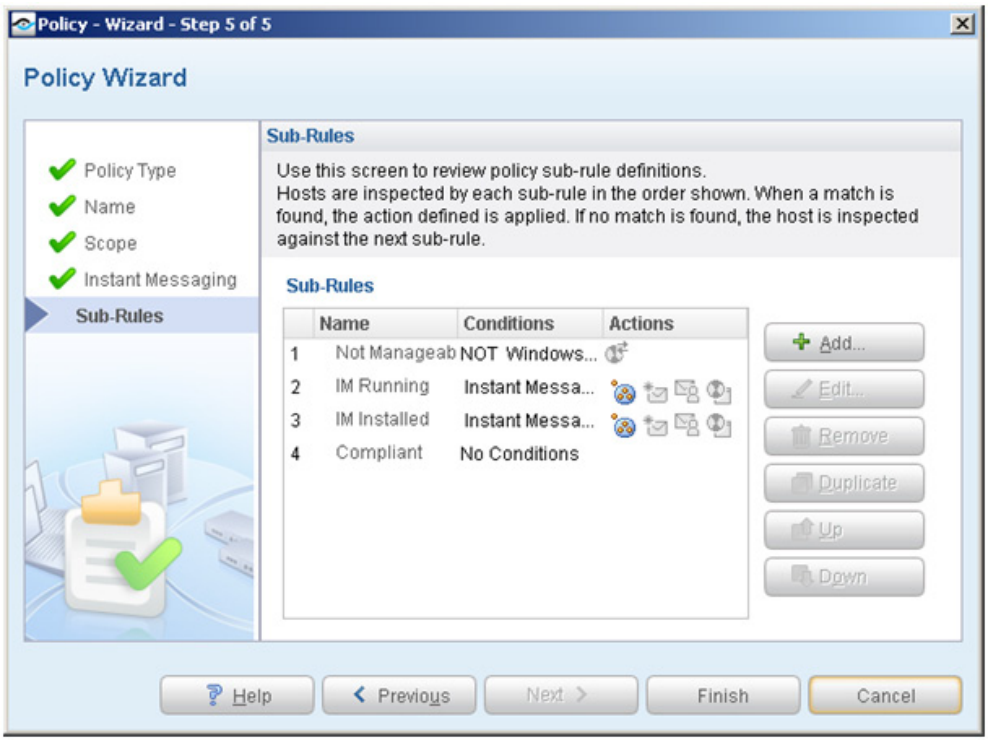
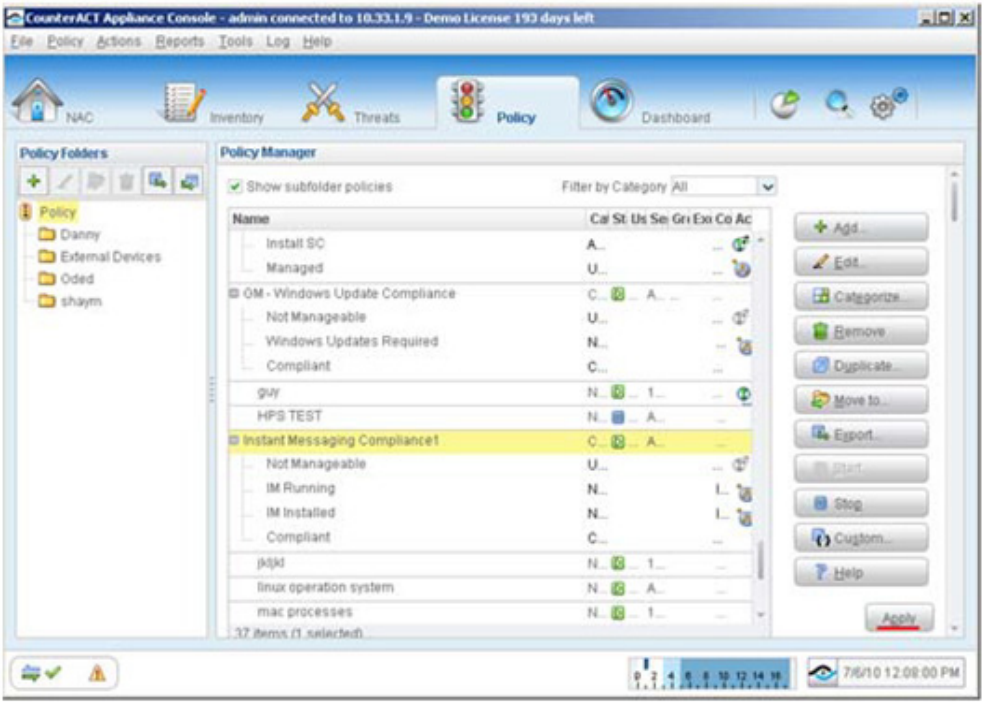
As with other policies, sub policies can be specified when you select **Next**.



To complete the policy, activate it and it will show up in the Policy window.



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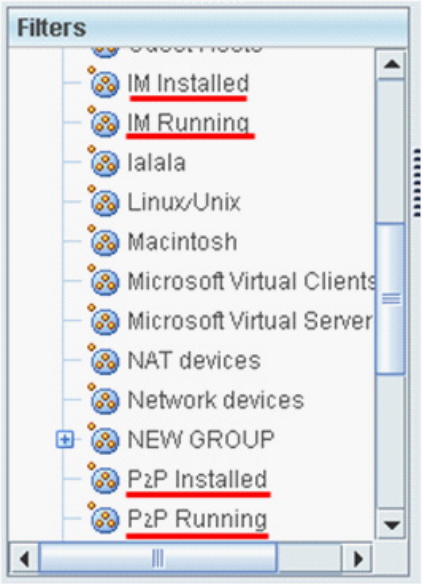
By clicking on a host address, CounterACT will show IM and P2P applications running on that host.

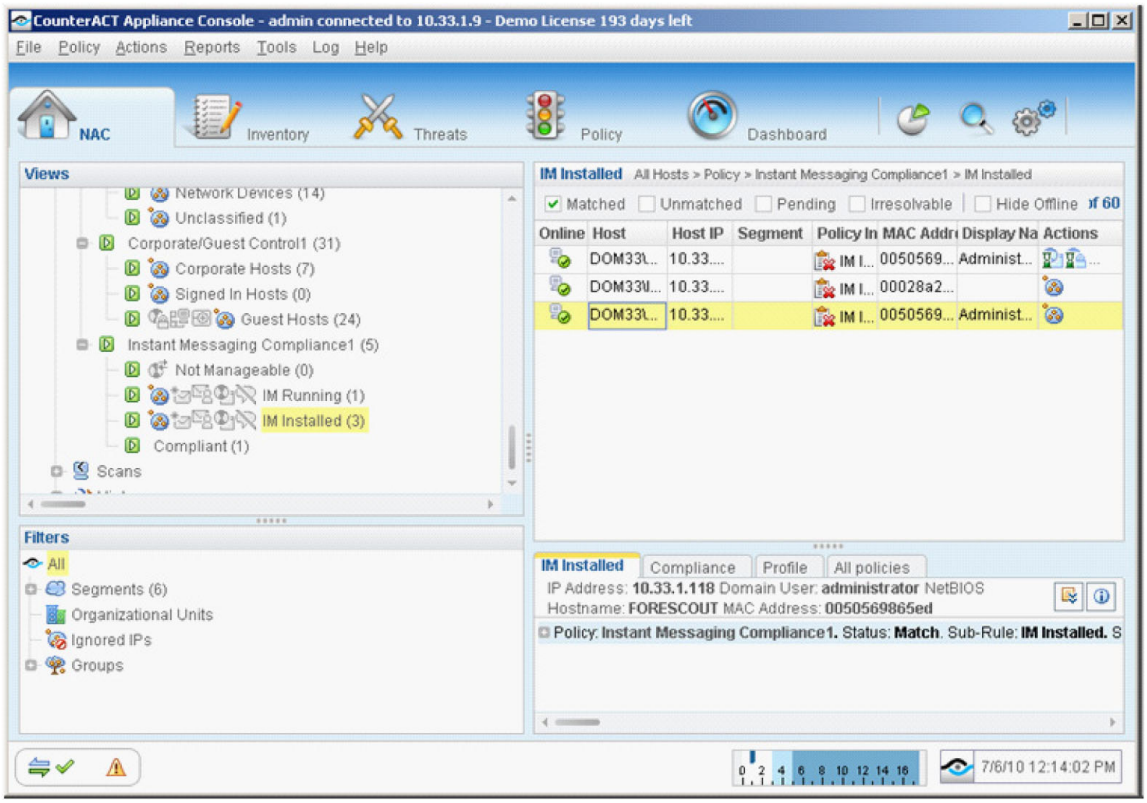


Evaluate Host Compliance

We now have some policies setup to allow evaluation of host compliance.

To view details about non-compliant endpoints and users choose the NAC icon on the Console toolbar. In the Views pane, navigate tot the policy folder for the policy you want to check and choose a host.

The asset information will be displayed in the Details pane.



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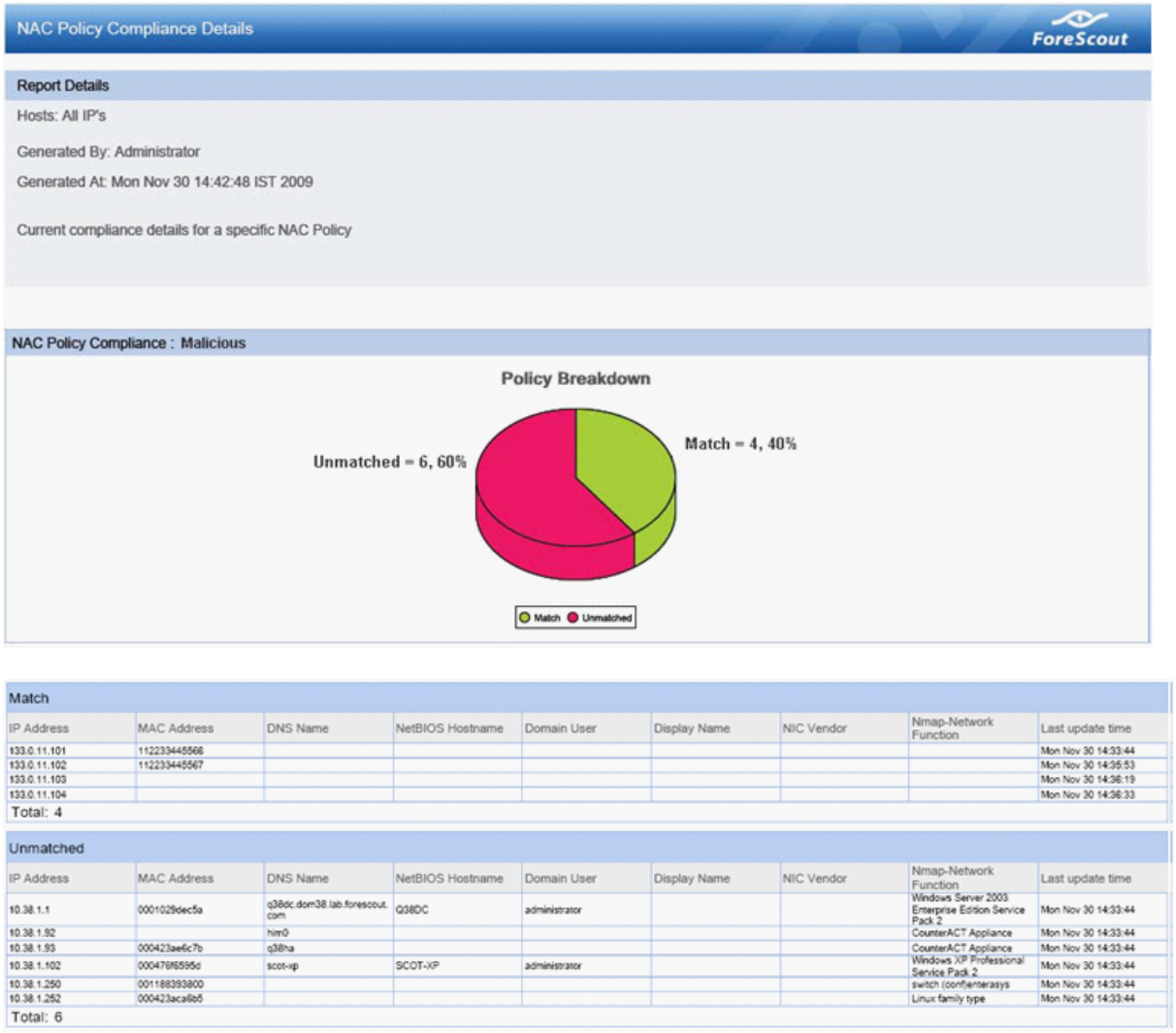
Detect and Block Zero-day Threats

Most of today's attacks come from the inside, from infected PCs. Once a PC has been infected, it can begin to attack the rest of the network, probing for and stealing sensitive data. Traditional firewalls and perimeter-based solutions are useless against these sorts of attacks.

ForeScout has a solution. ForeScout's patented *ActiveResponse*™ technology is built into CounterACT, which can detect attacks inside the network perimeter from infected PCs. ActiveResponse blocks both known and unknown attacks without signatures. This unique technology does not require any form of maintenance—no signature updates, no testing, no administrative review of event logs—so the total cost of ownership is very low.

Screenshot *(click to enlarge image)*


NAC Policy Compliance Details
ForeScout
Report Details
Hosts: All IP's
Generated By: Administrator
Generated At: Mon Nov 30 14:42:48 IST 2009
Current compliance details for a specific NAC Policy
NAC Policy Compliance : Malicious
Policy Breakdown
Unmatched = 6, 60%
Match = 4, 40%
Match
Unmatched
Match
IP Address | MAC Address | DNS Name | NetBIOS Hostname | Domain User | Display Name | NIC Vendor | Nmap-Network Function | Last update time
133.0.11.101 | 112233445566 | Mon Nov 30 14:33:44
133.0.11.102 | 112233445567 | Mon Nov 30 14:35:53
133.0.11.103 | Mon Nov 30 14:36:19
133.0.11.104 | Mon Nov 30 14:36:33
Total: 4
Unmatched
IP Address | MAC Address | DNS Name | NetBIOS Hostname | Domain User | Display Name | NIC Vendor | Nmap-Network Function | Last update time
10.38.1.1 | 0001029dec5a | q38dc.dom38.lab.forescout.com | Q38DC | administrator | Windows Server 2003 Enterprise Edition Service Pack 2 | Mon Nov 30 14:33:44
10.38.1.92 | him0 | CounterACT Appliance | Mon Nov 30 14:33:44
10.38.1.93 | 000423ae6c7b | q38na | CounterACT Appliance | Mon Nov 30 14:33:44
10.38.1.102 | 000476f65956 | scot-xp | SCOT-XP | administrator | Windows XP Professional Service Pack 2 | Mon Nov 30 14:33:44
10.38.1.250 | 001188393800 | switch (confidenterasys | Mon Nov 30 14:33:44
10.38.1.252 | 000423aca6b6 | Linux family type | Mon Nov 30 14:33:44
Total: 6

The above screens show the numbers of hosts on a small test network that are being affected by malicious threats.

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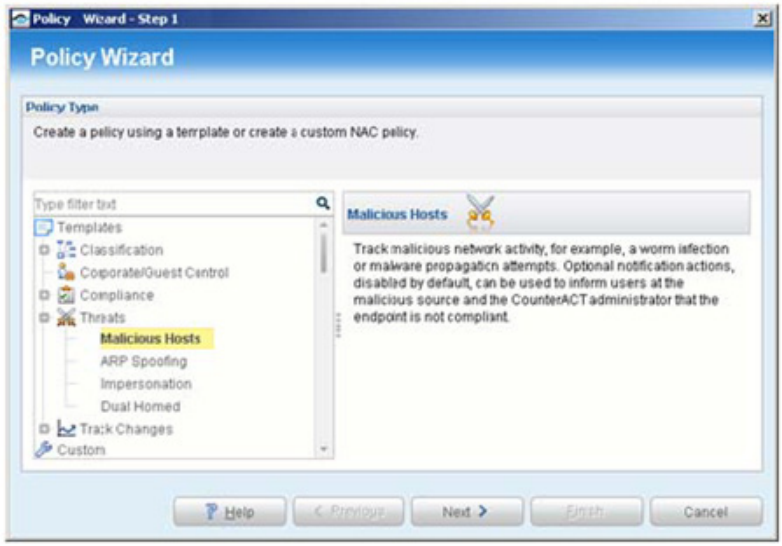
Step-by-step: Policy for Threat Protection

Many types of threats can be detected and mitigated by ForeScout CounterACT. This policy is created like the others, and we are using it to detect malicious hosts. Activating the built-in intrusion prevention just takes a few mouse clicks. Once again a policy is setup, named, spanned, specified, and activated.

Create a Policy for Threat Protection by opening the policy wizard menu item and clicking on "Threats". Choose "Malicious Hosts".

When you click on **Malicious Threats** as shown above, you will be requested to name the policy. Choose the default name.

This brings up a range for the policy, just as in the other policies. Add in the address range of the test network by clicking the "All" box.



Add an address range, click **OK**, and then **Next,** and a Main Rule screen appears. It is suggested for this test that the default settings be used. The defaults respond to common intrusion information gathering attempts like finger commands and port scans. More advanced settings and combinations can be used.

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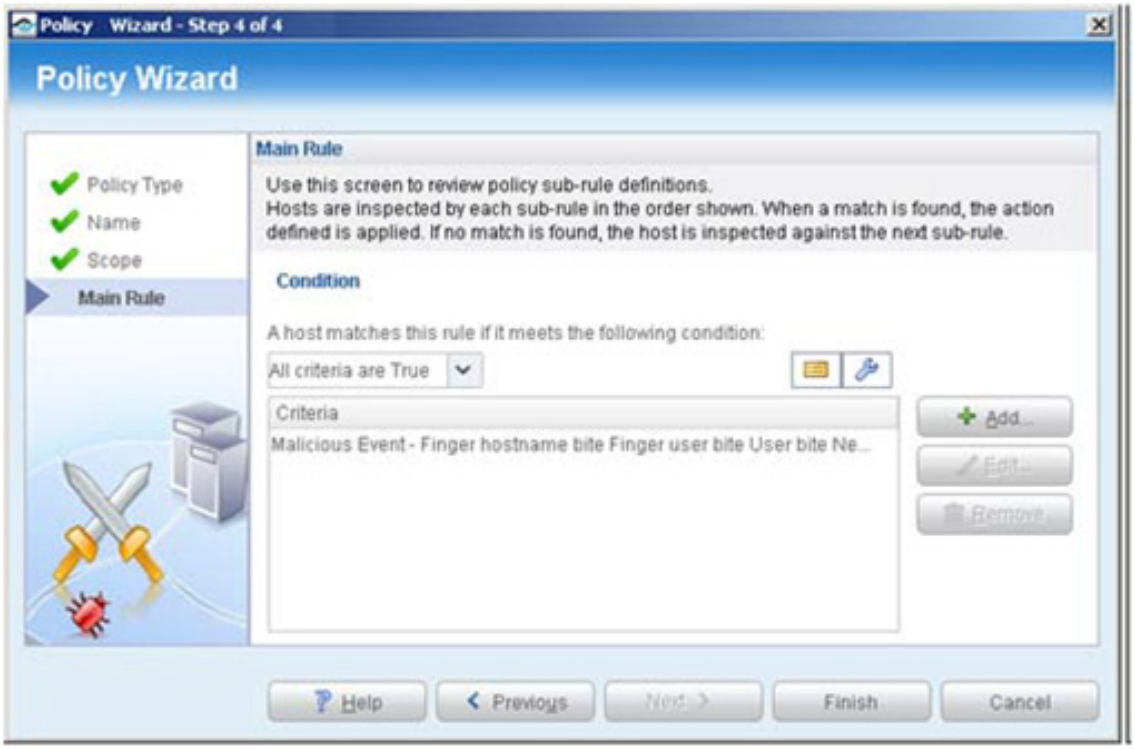
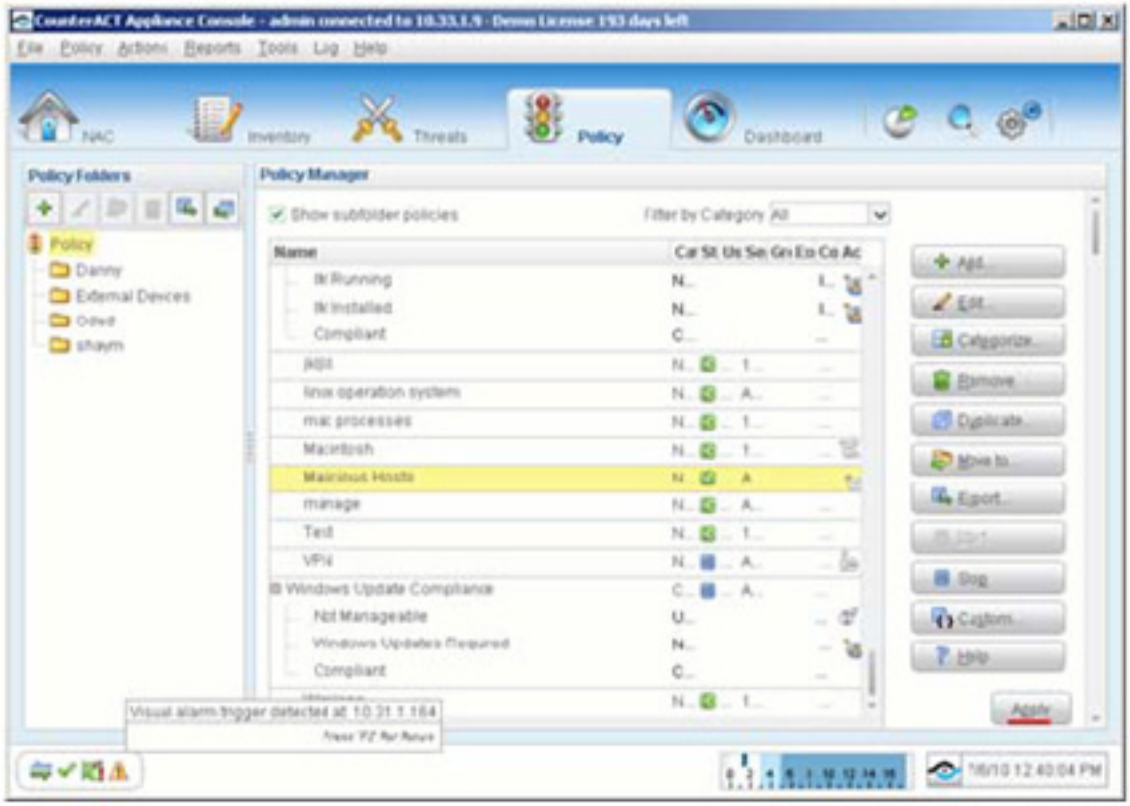
Now activate this policy like the others for it to become effective. Run a remote finger query and see the results. This policy is reported as are the others in the policy window.


Policy Wizard - Step 4 of 4
Policy Wizard
Policy Type
Name
Scope
Main Rule
Main Rule
Use this screen to review policy sub-rule definitions.
Hosts are inspected by each sub-rule in the order shown. When a match is found, the action defined is applied. If no match is found, the host is inspected against the next sub-rule.
Condition
A host matches this rule if it meets the following condition:
All criteria are True
Criteria
Malicious Event - Finger hostname bite Finger user bite User bite Ne...
Add...
Edit...
Remove
Help
Previous
Next >
Finish
Cancel



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Appendix A: Installation Instructions for the CounterACT Virtual Appliance

If you are installing ForeScout CounterACT Virtual Appliance, you will need a system with one of the following versions of VMware:

- VMware ESX or ESXi v3.5 update 5\
- VMware ESX or ESXi v4.0 update 2
- VMware ESX or ESXi v4.1 update 1

The minimum hardware requirement is 1GHz CPU, 1 GB of memory, and 80GB of hard disk space.
The guest OS is defined as "Other Linux-2.4 32bit kernel".

If you are installing CounterACT Virtual Appliance, you should receive the following information:

- A link to a CounterACT virtual system package image
- An email from ForeScout with one license file per virtual device to be installed

The instructions in this appendix are an abridged version of the Quick Install Guide and Installation Guide. This should be adequate information for simplistic test conditions. If more advanced testing is required, please refer to the CounterACT 6.4.1 Quick Install Guide and complete Installation Guide available from the support site or the evaluation manager.

Virtual Environment Setup

Verify that you have performed the following:

- *Define Real NICs on the VMware Server*
- *Create and Configure Virtual Switches*

Define Real NICs on the VMware Server

Verify that the VMware server on which the Appliance is installed is configured with two interface connections are required for Layer 3 deployment.

- ***Management & Response Interface***
  This interface allows you to manage CounterACT and perform queries and deep inspection of endpoints. The interface must be connected to a switch port with access to all network endpoints. The Appliance also responds to traffic using this interface to setup virtual firewalls, etc.

- ***Monitor Interface***
  This interface allows the Appliance to monitor and track network traffic. Traffic is mirrored to a port on the switch and monitored by the Appliance. Depending upon the number of VLANs being mirrored, the traffic may or may not be 802.1Q VLAN tagged. If more than one VLAN is mirrored, the traffic must be 802.1Q VLAN tagged.

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Create and Configure Virtual Switches

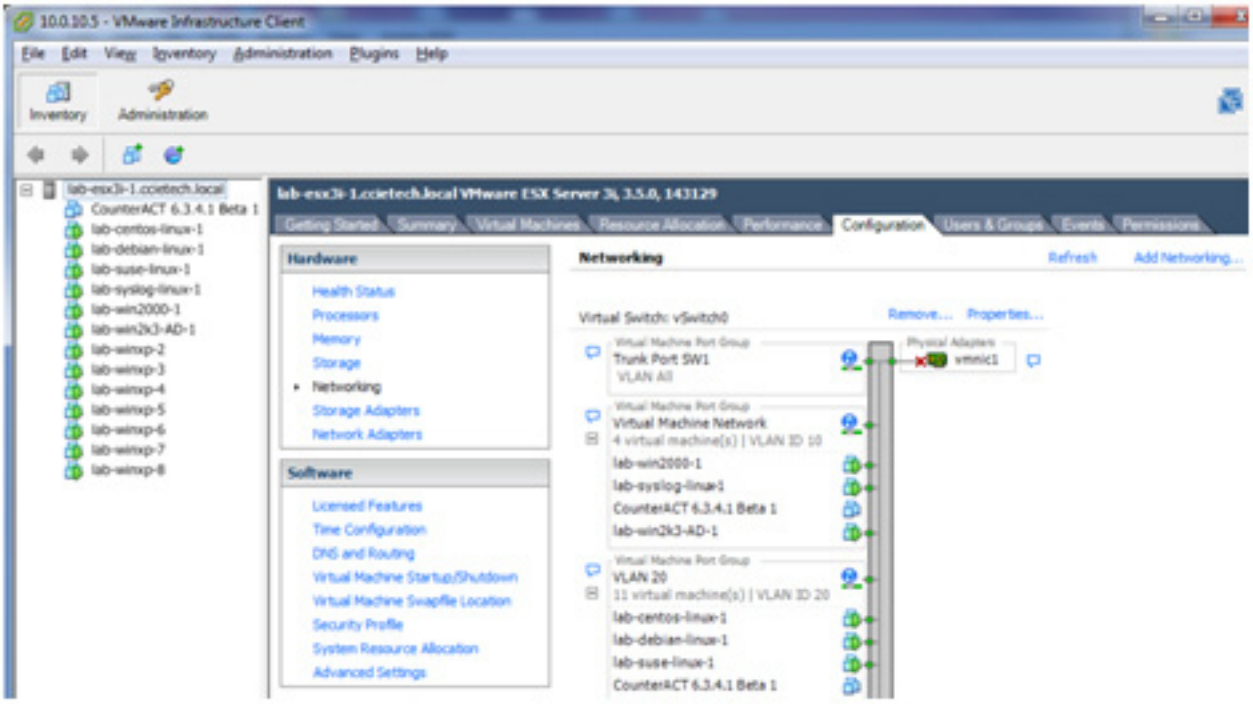
Verify that the VMware server on which the Appliance is installed is configured with interface connections are required for Layer 3 deployment).

There are other ways to deploy CounterACT Virtual Appliance: this document describes one alternative. (For example, you do not need a virtual switch for each port as vSwitches are generally trunk ports. The management interface and the response interface could be on one virtual switch with two logical interfaces configured on the vSwitch.)

Creating Virtual Switches

Select a host on which you want to install the virtual Appliance, and create virtual switches (vSwitches) for the management, monitor and response NICs on the host.
To create a virtual switch:

1. Log in to your VMware vSphere Console.
2. Select **Home>Inventory>Hosts and Clusters**.
3. Select the host (physical device) on which you want to install the CounterACT device.
4. Select the **Configuration** tab.
5. In the Hardware pane, select **Networking**.



6. To create a virtual switch, select the **Add Networking** link. The Connection Type page of the Add Network Wizard opens.
7. Select the **Virtual Machine** radio button and select **Next**. The Network Access page of the Add Network Wizard opens.
8. Select the **Create a virtual switch** radio button, select the available vmnic interface and then select **Next**.

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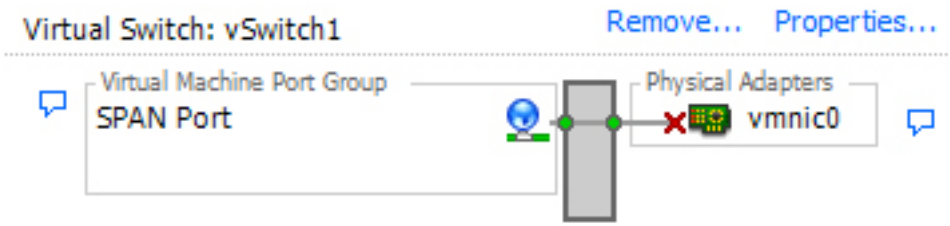
The Connection Settings page of the Add Network Wizard opens.

9. Type a suitable name in the Network Label field and select **Next**.

   *For a vSwitch handling mirrored / SPAN traffic (that is, the monitor interface), it is suggested to use **SPAN Port**. Leave the **VLAN ID** field empty as you want to SPAN all traffic and not VLAN tag any of it.*

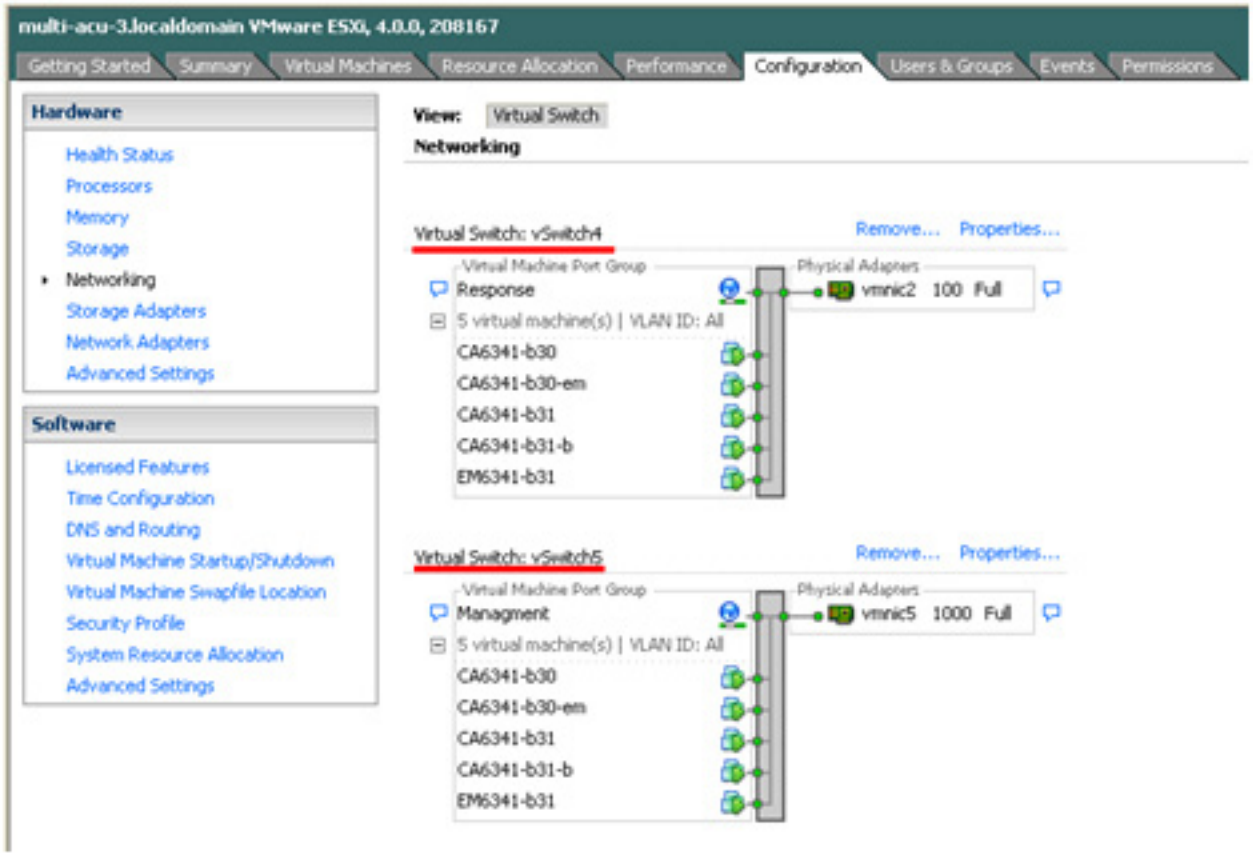
   The Summary page of the Add Network Wizard opens.

10. Select **Finish**. The vSwitch is created.
    The wizard closes and returns to the Configuration tab of the Inventory window. The new switch is added in the window.



Configuring Virtual Switches

After creating virtual switches for the monitor, management and response interfaces, you must configure them:



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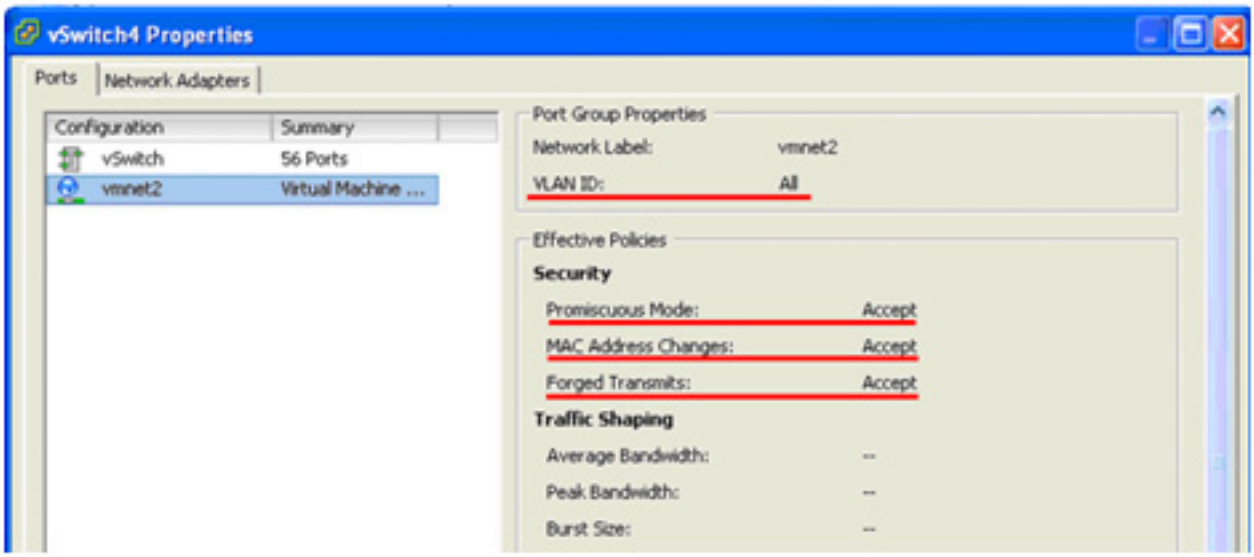
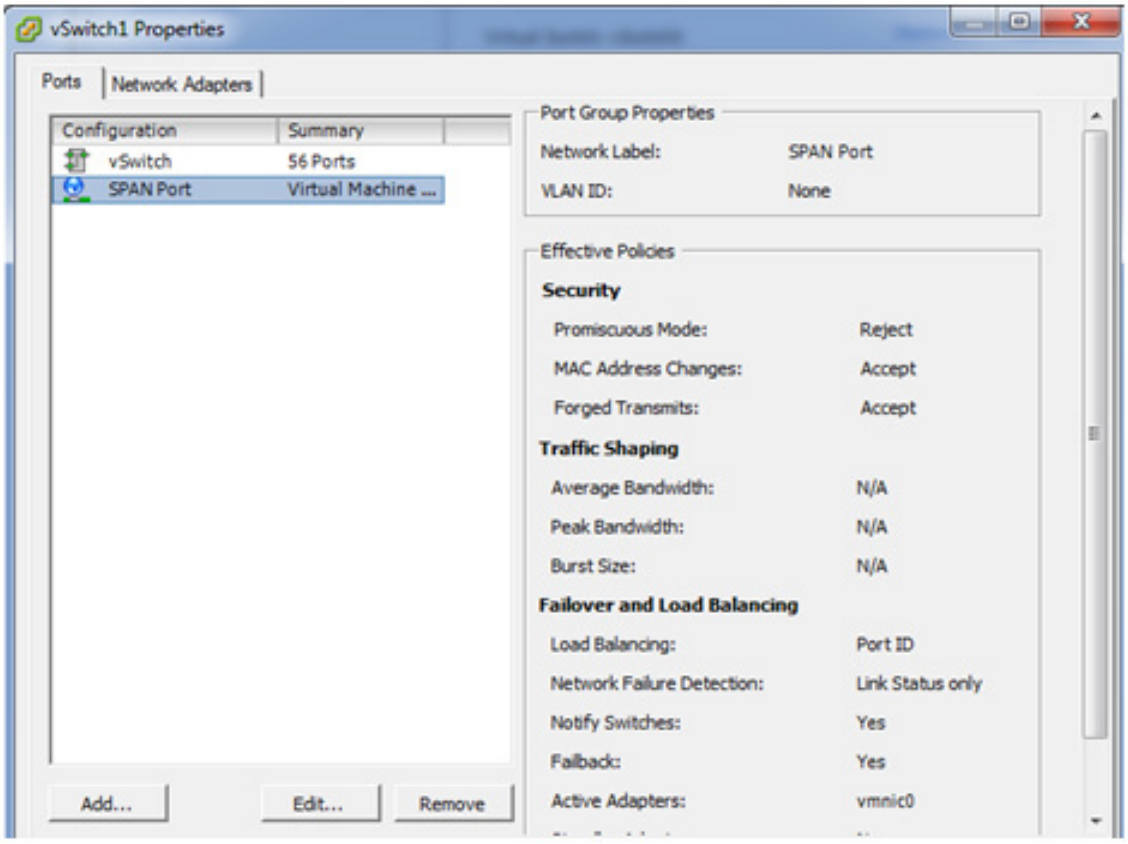
- For the monitor and response interfaces:
  - Verify that the VLAN ID is defined as **All**. If not, define it as **4095**.
  - In the Security section, verify that all three options (Promiscuous Mode, MAC Address Changes and Forged Transmits) are marked **Accept**. If not, select and Accept them.



For the monitor interface for mirrored / SPAN traffic: In the Security section, select and Accept the Promiscuous Mode option.

To configure a virtual switch:

1. Select the **Properties** link for the virtual switch. The vSwitch Properties dialog box opens.



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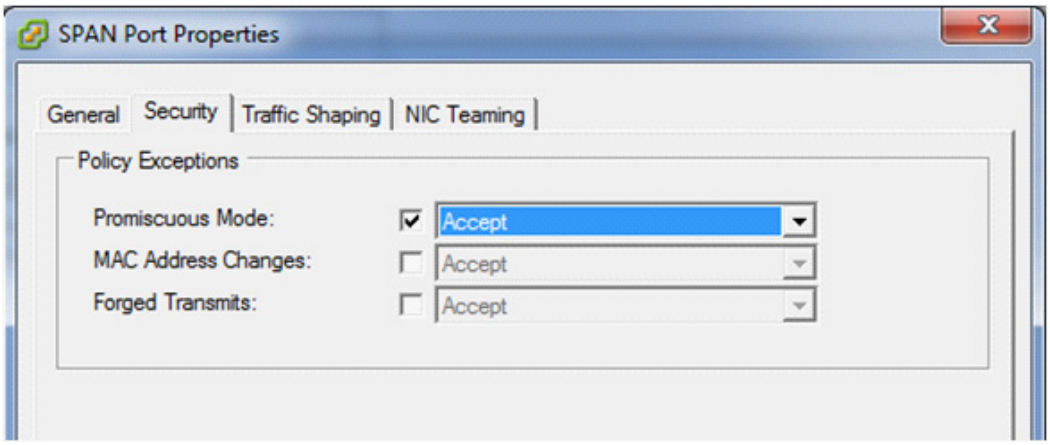
2. In the **Ports** tab, select the appropriate Port Group and then select **Edit**. The <Network_Label> Properties dialog box opens.
3. In the **General** tab, define the VLAN ID, if necessary.
4. In the **Security** tab, select **Promiscuous Mode** and Accept it.



5. Select and Accept other Policy Exceptions, if necessary.
6. Select **OK** to return to the vSwitch Properties dialog box.
7. Select **Close**.

   Extract Deployment Files from the CounterACT Virtual Appliance System Package.

   Your CounterACT system package is a zip file that contains all the files required to deploy a CounterACT Virtual Appliance. The file includes:

   - An OVF template
   - A file containing the virtual machine

You should extract the contents of the zip file and note the location of the extracted content.

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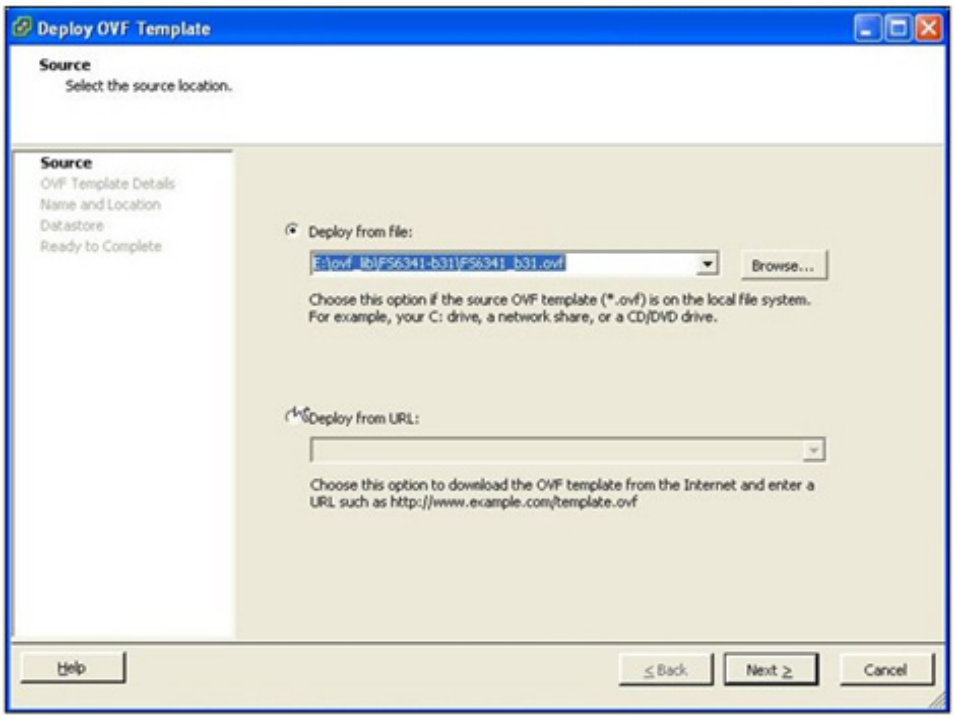
Deploy CounterACT Virtual Appliance

Perform the following once for each CounterACT Virtual Appliance that you plan to deploy.

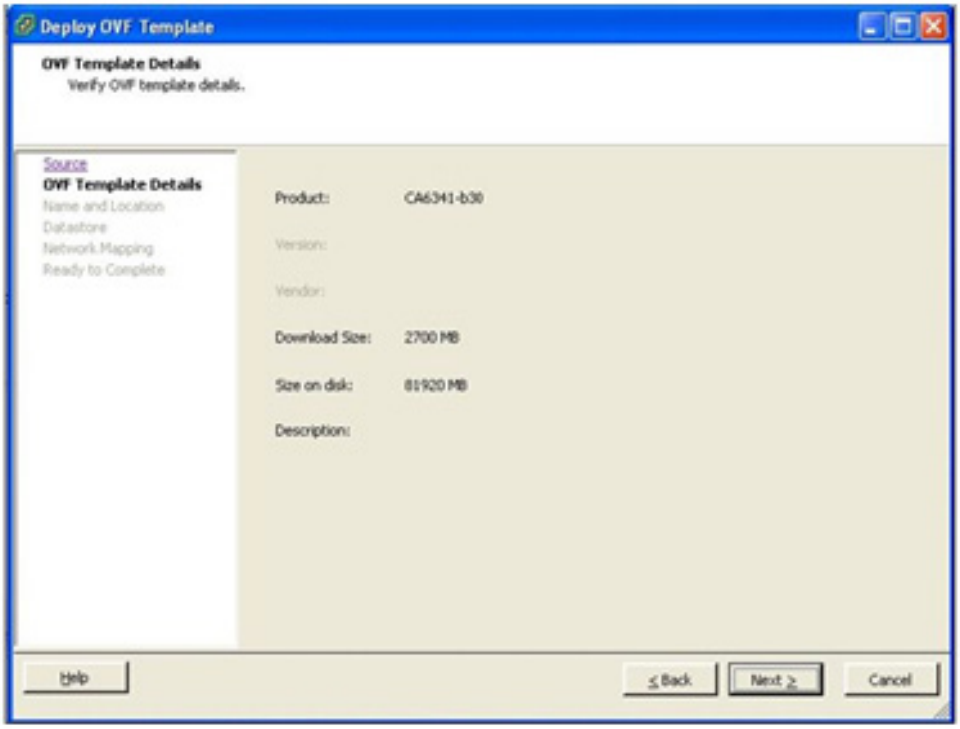
1. Access the vSphere Console.
2. Select **File>Deploy** from file (OVF template).

   A wizard opens at the Source page, and lets you select the location from which to deploy the template.


Deploy OVF Template
Source
Select the source location.
Source
OVF Template Details
Name and Location
Datastore
Ready to Complete
Deploy from file:
E:\ovf_lib\FS6341-b31\FS6341_b31.ovf
Browse...
Choose this option if the source OVF template (*.ovf) is on the local file system.
For example, your C: drive, a network share, or a CD/DVD drive.
Deploy from URL:
Choose this option to download the OVF template from the Internet and enter a URL such as http://www.example.com/template.ovf
Help
< Back
Next >
Cancel

3. Select a location and select **Next**.

   The OVF Template Details page opens.



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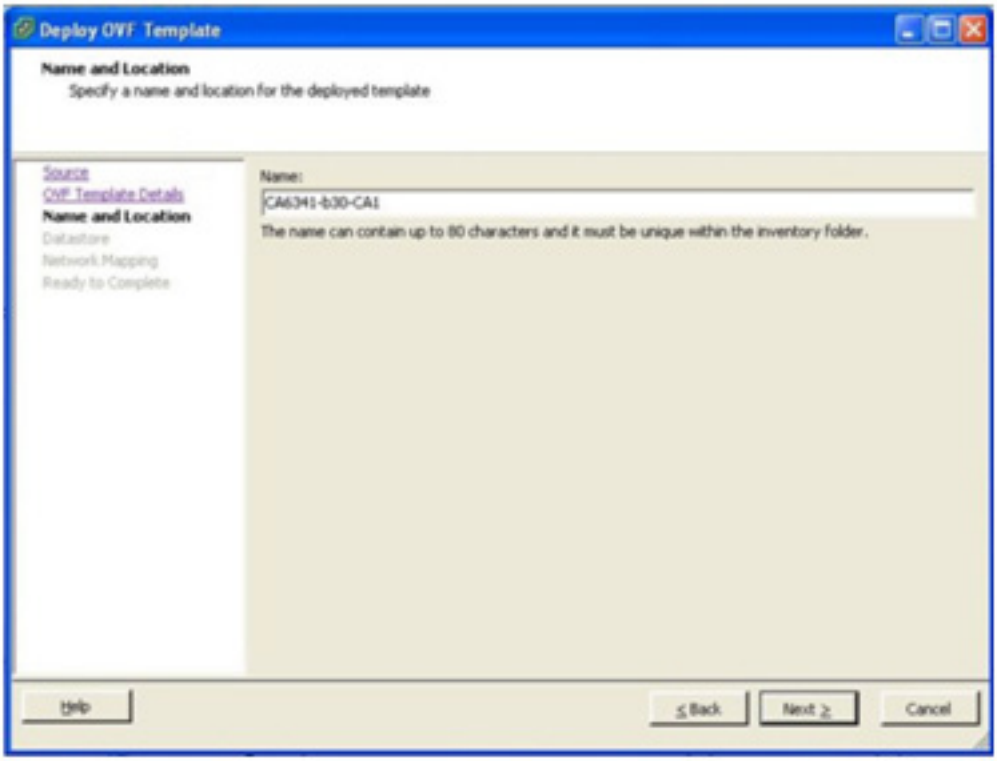
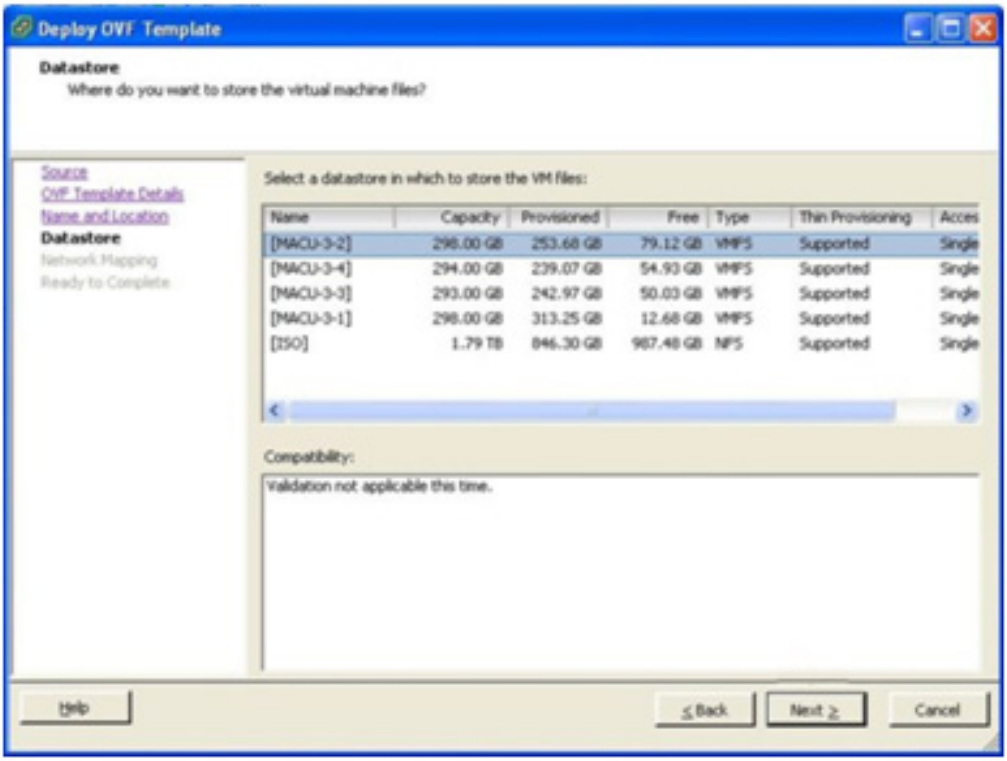
4. Select **Next**. The Name and Location page opens.



5. Specify a name and select **Next**. The Datastore page opens.



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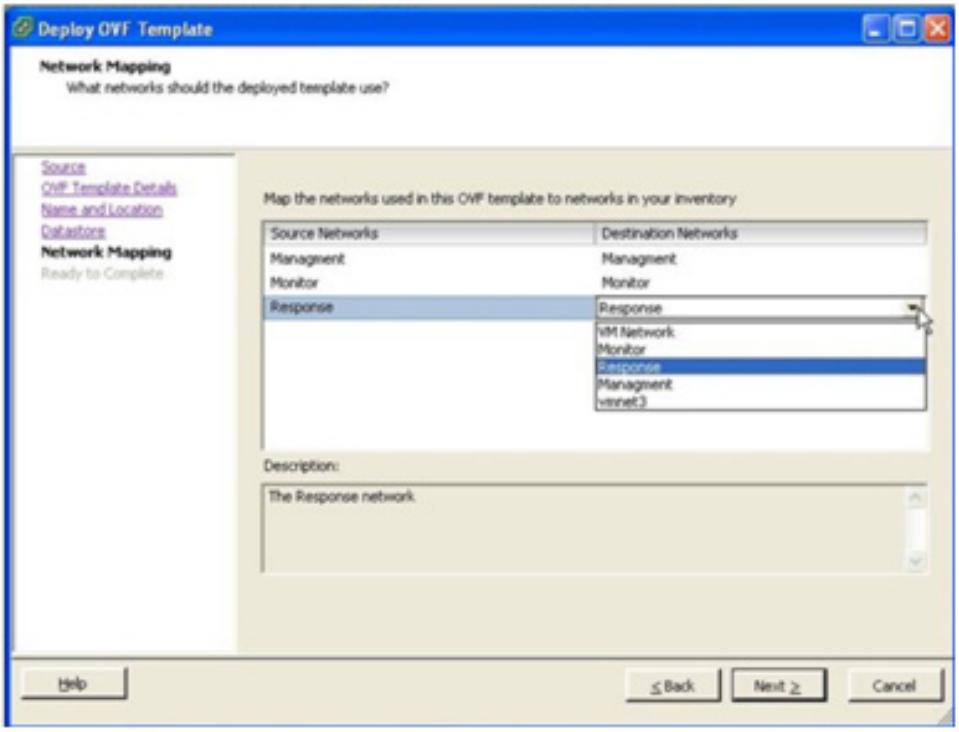
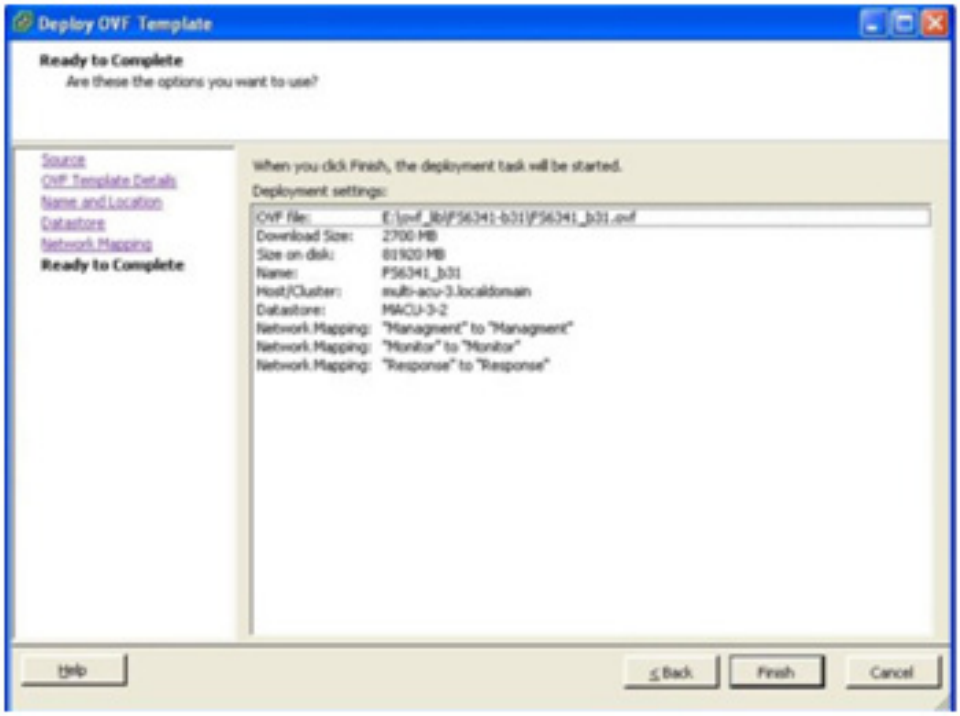
6. Define the location where you want to store the virtual machine file. You need at least 80 GB free space. Select **Next**. The Network Mapping page opens.



7. Map the physical and virtual interfaces. Select **Next**. The Ready to Complete page opens.



8. Select **Finish** to deploy the CounterACT virtual device.

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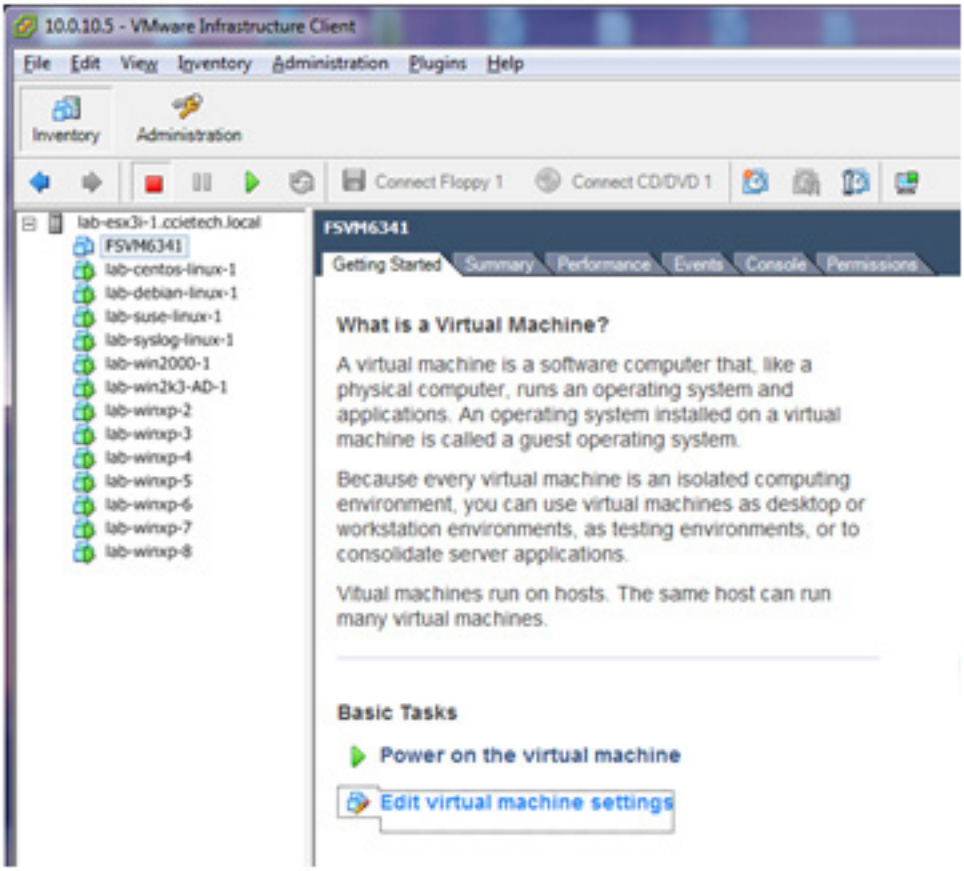
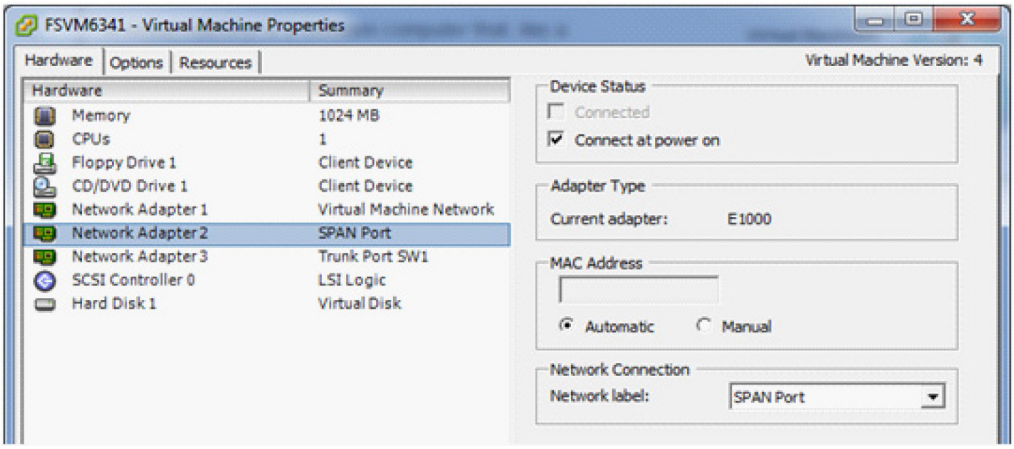
Post-Deployment Verification and VMware Configuration

Verify the virtual host properties after deployment.

1. In the VMware vSphere Console, select the **CounterACT virtual machine**.



2. Select **Edit** virtual machine settings. The Virtual Machine Properties dialog box opens.



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3. For each interface verify that:
   - The NIC card Adapter Type is defined as E1000.
   - The Network label is configured with the correct virtual switch.

The following table shows the mapping between the interfaces.

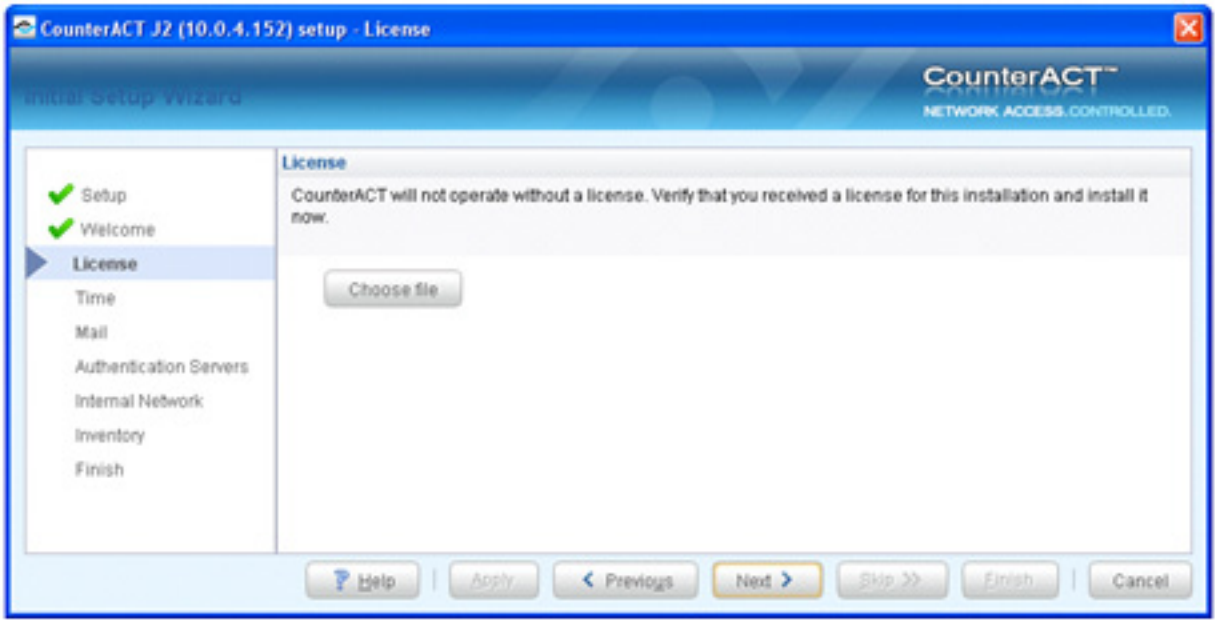
VM Interface	CounterACT Interface
Network Adapter 1	eth0 (Management & Response)
Network Adapter 2	eth1 (Monitor)

After verifying that each interface is configured correctly, you can configure the CounterACT virtual devices.

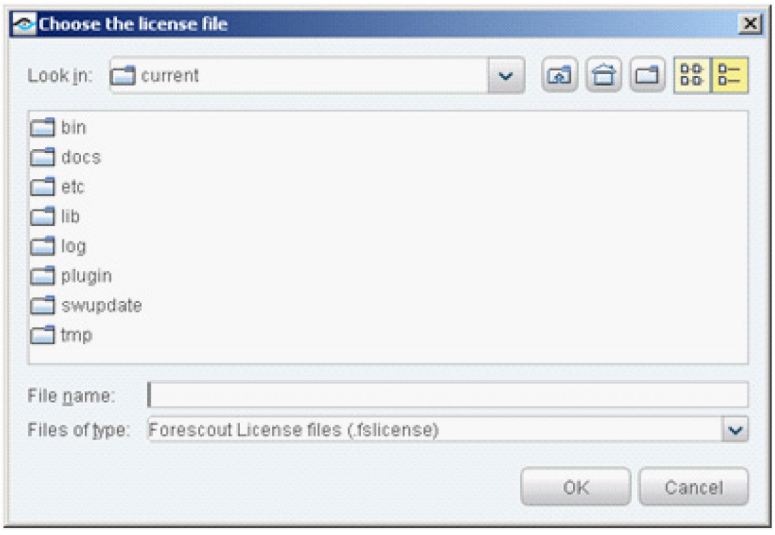
Refer to the *CounterACT Console User Manual* or online Help for information about working with the Wizard.

In the License tab, select a virtual demo license that you received from your ForeScout contact, valid for 30 days. See *Error! Reference source not found*. for details.

1. Select **Choose file** to install the license you need.



2. The Choose the License File dialog box opens.



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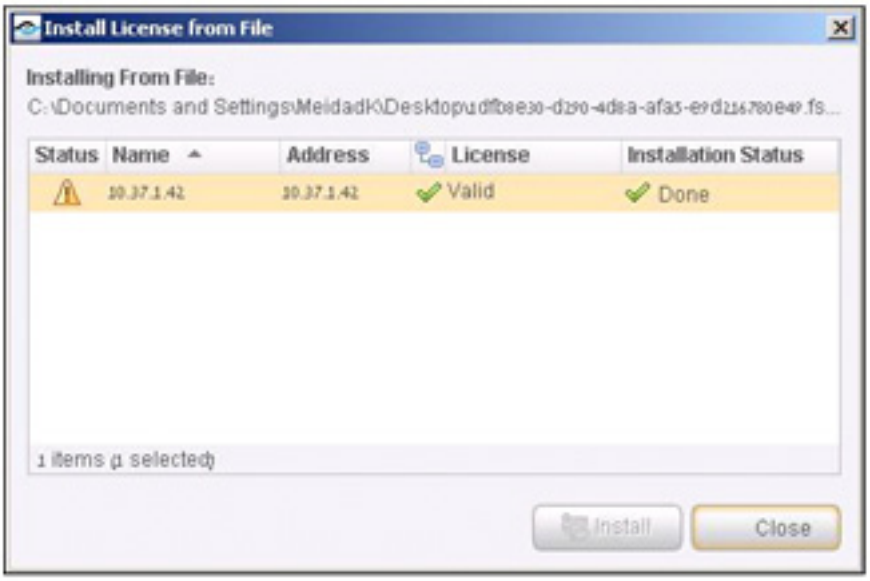
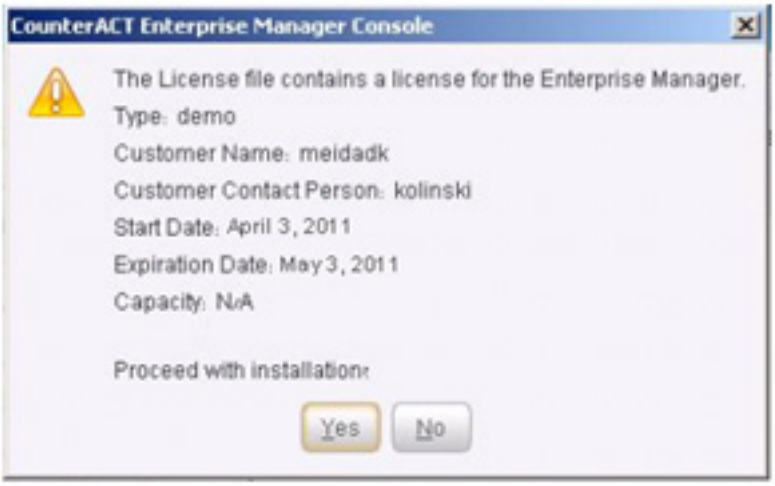
3. Navigate to the license and Select **OK**.

   The Install License From File dialog box opens.

   When working with the initial demo license, you can select any license file for any device; provided that a specific license file is installed on a specific device. This means you should not use the same license file for more than one device. If you do so, the license may be revoked. Moreover, you will be unable to add an Appliance to the Enterprise Manager, if an Appliance with the same license is already connected. You can rename the file if required. Extended demo licenses and permanent licenses are tailored for a specific device.



4. Select the device and select Install. A dialog appears with information about the installation start and end date, and other license details.



5. Select **OK** and complete the Wizard.

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Contact Information

For ForeScout technical support send email to support@forescout.com
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